

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 521.—VOL. XV.]

LONDON: SATURDAY, AUGUST 16, 1845.

[PRICE 6D.]

SHROPSHIRE.—VALUABLE FREEHOLD MINING
PROPERTY, containing 136a. 3a. 26p., or thereabouts, with a most excellent **HANSON HOUSE**, called **PHORSLEE HALL**, situate at Priorlee, in the parish of Shifnal, within two miles of the town of Shifnal, and close to the turnpike-road, leading from Birmingham to Shrewsbury, and within a mile of each of the projected lines of rail-road from Birmingham and Wolverhampton to Shrewsbury, and six miles from the town of Wellington, **TO BE SOLD, BY AUCTION**, in one lot, by Messrs. WALKER and PAGE, at the Swan Inn, Wolverhampton, on Monday, the 18th day of August, 1845, at Five o'clock in the afternoon, subject to such conditions as will be then produced.
For further particulars apply to Messrs. Pritchard and Co., solicitors, Bromley, Sarop.

TO BE SOLD, BY AUCTION, by Mr. THOS. GLOVER, at the Castle Inn, in the town of Swansea, on Wednesday, the 20th day of August, 1845, at One o'clock in the afternoon (subject to such conditions as shall be then and there produced).
THE WEEG VACH COLLIERY, situate in the parishes of Swansea and Llangefelach, in the county of Glamorgan, and within two miles distance of the port of Swansea. The coal is highly bituminous, and of the best quality; all the large is readily disposed of, for ready money at the pit's mouth, for household purposes, in the town and neighbourhood, and the small is in request for copper works, gas works, and for making coke. There are two steam-engines erected on the premises, both in good order. The seams now in work are one six feet, and the other three feet, in thickness, producing at present about fifty tons per day, but the working is capable of being considerably increased; there are, however, several other veins, of which the South Wales Railway intersects the property.

Further particulars may be obtained on application to the proprietor, T. S. Strick, Esq., Swansea; or to the auctioneer.

GLoucestershire.
DEAN FOREST.—ELIGIBLE INVESTMENT.—TO CAPITALISTS, RAILWAY COMPANIES, COAL AND IRON MASTERS, AND OTHERS.—Mr. P. ROBINSON is instructed to submit for SALE, BY AUCTION, at the Kings Head Hotel, in Gloucester, on Wednesday, the 27th day of August next, at Four o'clock in the afternoon, in one lot, subject to conditions, all that superior GALE, or COAL-FIELD, known as the East Side and Newnham Bottom Collieries, under the award of her Majesty's Dean Forest Mining Commissioners to the Cheltenham and Forest of Dean Coal Mining Company, situate in the township of West Dean, near Ruardean. The extent of the mineral tract belonging to this colliery is shown on the map at the Coal Office in Coleford, and also by the award of the said commissioners; it contains about 140 acres of unworked coal, and is galed to the Hill Delf Vein, which varies in thickness from five to six feet, and will yield in every square, or superficial yard, 15 tons of coal, and known to be one of the most extensive and best works opened in the Forest of Dean. There are four pits or shafts sunk down to the coal, with two condensed steam-engines, pumping apparatus, weigh-bridge, &c., to which extensive stabling and other necessary buildings are attached; and as the only motive for selling is want of capital in the present holders to work the gale successfully, it will afford a rare opportunity for investment, or profitably working this coal-field, commanding the thickest vein in the Forest, and one of the best quality.

The situation is within about half a mile of the projected Dean Forest, and the Gloucester, Hereford, and Monmouth Railway, is equally well for Severn and Wye transit; and with judicious management, would pay a large return for the outlay.

Particulars and conditions of sale to be had on and after the 13th inst., of Mr. John Cooke, auctioneer, Cheltenham; at the place of sale; and of Mr. Robinson, land and mineral agent, Hill House, Little Dean.

ELIGIBLE MINING INVESTMENT.—FOR SALE, BY PUBLIC AUCTION, on Friday, the 29th instant, at Wright's Hotel, Liskeard, at Three o'clock in the afternoon (unless previously disposed of by Private Contract), all that promising LEAD MINE, called **GREEN VALLEY**, situate in the parish of Beer-ferri, Devon, on the banks of the Tamar, opposite Calstock, with all the materials thereon, including an excellent steam-engine of the best construction, and quite new; and every other requisite for effectually working the mine.

There is at present a promising lead lode, and abundance of fluor spar in sight, and an extension of the set southward in offer the adventures.—For further particulars, or to treat for the purchase, apply to the purser, Samuel Phillips, Liskeard.

Dated August 11, 1845.

MERIONETHSHIRE.
FREEHOLD PROPERTY TO BE SOLD, BY AUCTION, by Mr. W. EVANS, at the Golden Lion Inn, in the town of Dolgelly, on Tuesday, September 2, 1845, between the hours of Five and Seven o'clock in the evening, subject to such conditions as shall be then produced, all that capital FARM-HOUSE, FARM, and LANDS, situate in the parish of LLANABER, in the county of Merioneth, called CAEGWLAN, consisting of 365 acres, or thereabouts. The property is situate within a short distance of the high road leading from Dolgelly to Barmouth, and is distant from the latter three miles only. The aspect is agreeable; and, with a little outlay, a comfortable residence may be made. To gentlemen interested in MINING, it is attractive, as possessing many indications of ORE; and, from recent opening, ore of a very superior quality was got. The value of this property will be greatly enhanced upon the formation of the intended railway to Porthdynnall, which must pass through or within a short distance of it.—Samples of ore are at the office of the *Mining Journal and Railway Gazette*, 25, Fleet-street, London.

For further particulars apply to Mr. W. H. Roberts, Hendrecoed, Barmouth; and also at the offices of Messrs. Owen and Griffith, solicitors, Dolgelly.

ESTATE IN LANARKSHIRE, desirable as a RESIDENCE
and INVESTMENT, and embracing a large MINERAL FIELD.—TO BE SOLD, BY PUBLIC AUCTION, within the Royal Exchange Sale Rooms, Glasgow, on Wednesday, the 17th September next, at Two o'clock in the afternoon, the

ESTATE OF AUCHINGRAY AND WHITESIDE, situate in the parish of New Monkland and Shots—twenty-five miles from Edinburgh, and sixteen from Glasgow, containing between 2000 and 3000 Scotch acres.

The MINERALS are likely to prove of very great value. There is a large quantity of workable COAL of excellent quality, and there are many appearances of IRONSTONE in different places. The Slamanan railway passes through the lands, which are only about eight miles distant by railway from the large iron-works in the district around Coatbridge.

The MANOR-HOUSE, which is large and commodious, is situated about a quarter of a mile from the turnpike-road from Edinburgh to Glasgow—was built in 1819, and stands upon a rising ground, commanding an extensive prospect, overlooking a sheet of water, of 200 acres, and surrounded by thriving plantations, through which are numerous gravel walks.—The offices are in every respect suitable and in good repair; the garden contains nearly two acres, surrounded by a wall; and the pleasure-grounds were laid out with much taste, and at great expense, by the late Robert Haldane, Esq.

There are between 300 and 400 acres of wood on the property, laid out for shelter, and to suit the varieties of the ground. The farms are of different sizes, the steadings in good repair, several of them new, and all of easy access.

There is abundance of game, the estate, and fish in the reservoir, also in the Black Loch, on the north boundary of the property.

An estate so desirable, both as a residence and investment, is rarely to be met with at so short a distance from the two largest cities in Scotland, while its situation in a mineral district, with constantly extending railway communication and its own productions, recommend it strongly to capitalists.

A large part of the price may remain in the purchaser's hands.

For particulars apply to R. Haldane, Esq., W.S., 43, North Castle-street, Edinburgh. Mr. Russell, of Eastfield, will give every local information, and the property will be shown on application at the "House of Auchingray."

Messrs. Mitchell, Henderson, and Mitchell, writers, Glasgow, will also afford information to intending purchasers.

MINE MATERIALS FOR SALE.—Early in SEPTEMBER
NEXT, will be submitted for SALE, BY PUBLIC AUCTION, the valuable MINE MATERIALS at WHARF PRUDENCE MINE, consisting of ONE 50-inch cylinder PUMPING-ENGINE, with two boilers, ONE STEAM WHIM, 26-inch cylinder, and one new boiler, with crushing apparatus attached; capstan and shears, 14-inch and other pumps, rods, &c., and a large quantity of other excellent materials.—Full particulars of which will shortly be advertised.—Dated Wharf Prudence, Aug. 4, 1845.

IMPORTANT TO CAPITALISTS.—TO BE SOLD, OR LET, TWO EXCELLENT SLATE QUARRIES, situated in the parish of LLAN-PROTHEN, in the county of Merioneth, about five miles from Porthmadoc, where the Festiniog slate is shipped. One of the quarries hath been worked to advantage for many years, and the other may be opened for a trifling expense. These quarries are very extensive, and the slates as good in quality as any of the celebrated quarries of Festiniog, being part of the same vein. They are capable of being worked, by a spirited capitalist, so as to produce large profits.—Terms moderate. Immediate possession.

For further particulars apply to Mr. Maraden, Llanfrothen, Beddgelert, Carnarvonshire. [This advertisement will not be repeated.]

CAPITAL, EXTENSIVE, AND VALUABLE SLATE
QUARRY, with immediate possession.—TO BE LET, OR SOLD, all that capital, extensive, and valuable QUARRY of SLATES, of the best quality, now open, and in work, called **Rhiwbach**, together with the cottages and other offices attached thereto, situate in the parish of PENMACHNO, in the county of Carnarvon. The above quarry has been worked for about twenty years, and is situate within two miles only of the Festiniog Railway, along which is conveyed the slate from the neighbouring extensive quarries to Porthmadoc; and, by a comparatively small outlay, a road might be made from the above quarry to the said railway. It is also situate about fourteen miles from Trefriw Quay, on the River Conway—an excellent shipping for vessels of large tonnage. The quarry is capable of being extensively and profitably worked by an experienced and spirited capitalist, who will find the above well worthy of his notice.—Terms liberal. Also a comfortable HOUSE, with an extensive FARM.—For further particulars apply (if by letter, post paid) to Mr. Mouldale, Gwynedd, Anglesey.

TO IRON AND COAL MERCHANTS.—WANTED, a
SITUATION as MINERAL AGENT, or SUPERINTENDING A COLLIERY.—The advertiser is well acquainted with surveying, levelling, and mapping, and has a practical knowledge of fire damp, and is well acquainted with the minerals of South Wales and the working of lead mines—would have no objection to engage on the continent. The most satisfactory reference as to character and ability may be had for the last ten years.—For further particulars apply by letter (post-paid), to "F.," care of Mr. J. Woodrow, hat manufacturer, Oldham, Lancashire.—Aug. 12.

A GENTLEMAN, who has been superintendent for the last twenty years of a mining establishment in Mexico, wishes for EMPLOYMENT, either in a SIMILAR LINE, or as SUPERINTENDING of a RAILROAD, at home or abroad. The most satisfactory references can be given.—Direct to "J. C.," Post-office, Lower Sydenham, Kent.

WANTED TO PURCHASE, a good SECOND-HAND
WATER-WHEEL, either wood or iron—33 feet diameter, 3 feet breast, with head stocks, cranks, connecting-rods, and two bobs; also, THIRTY-FIVE FATHOMS OF IRON PUMPS, 11 or 12-inch bore, with working-barrel and slide pipe.—Address, with particulars, John Tattersall, Pleasant Dairy, Leeds.—Leeds, Aug. 6.

COMBIMARTIN AND NORTH DEVON LEAD AND
SILVER MINES.—Notice is hereby given, that the GENERAL ANNUAL MEETING of the shareholders in the above concern will be HELD at the Counting-house, on the Mine, on Wednesday, the 20th day of August next, at Twelve o'clock at noon.
Combimartin Mine, July 29, 1845. C. R. WEBB, Secretary.

ASSAYING AND MINERAL ANALYSIS.—IMPORTANT
TO THE PROPRIETORS AND SHAREHOLDERS OF MINES, &c.—Messrs. MITCHELL and FIELDS'S LABORATORY is OPEN TO GENTLEMEN for INSTRUCTION in all BRANCHES of ASSAYING, MINERAL ANALYSIS, and GENERAL CHEMISTRY; ASSAYS and ANALYSES conducted as usual.—For terms address to Messrs. Mitchell and Fields, assayers, &c., 5 A, Hawley-road, Kenilworth, London.

THE PATENT GALVANISED IRON COMPANY
call PUBLIC ATTENTION to the following, amongst other GREAT WORKS executed with their patent article:—
THE ROOFS OF THE NEW HOUSES OF PARLIAMENT, at Westminster.
THE SLIPS, or SHEDS, for building "first-rates," in the ROYAL DOCKYARDS, at Woolwich, Portsmouth, Deptford, &c. (the latter visible in passing down the Thames, and is an object of great beauty, having a centre span of eighty-two feet). The Timber Sheds, and other buildings, in the Royal Dockyards, are also being roofed and constructed with this fire-proof material.
THE BUOYS and other MARINE WORKS of the Honourable Corporation of the Trinity House have for two years been CONSTRUCTED with the Galvanised Iron, which resists effectively the action of sea water.
The celebrated ELECTRIC TELEGRAPHS of Messrs. Cooke and Wheatstone are CONSTRUCTED exclusively with the company's Galvanised Wires; &c.
And this indestructible iron, under all common influences—viz., sea water, saline or damp atmosphere, is admirably adapted for:
ROOFING in all climates, being Fire, Hurricane, and Lightning proof, if a continuous communication be formed with the earth by Galvanised Iron Spouting attached to the roof.
DOCK-WORK, chain or wire rope bridges, wire fences, fire proof buildings, corrugated doors, shutters, greenhouses, conservatories, and an endless variety of purposes.
Roofs of gas works and chemical manufactories.
Ship-building purposes—viz., blocks, bolts in lieu of copper, and knees.
For chain rigging, wire rigging, and sheathing, it is extensively used, and the following CERTIFICATE, amongst many others, is affixed:—

Lloyd's Register, London, February 7, 1845.

2, White Lion-court, Cornhill.

The undersigned surveyors to this society did, at the request of Messrs. Malins and Bawlinsons, examine the Patent Galvanised Iron Sheathing upon the bottom of the brig *Mary Stewart*, lying in Messrs. Curlew, Young, and Co.'s dry dock, Limehouse, and lately returned from a voyage to the island of Icalaboo, on the coast of Africa, and found it unbroken and perfect throughout the vessel's bottom, and no appearance of corrosion or oxide of iron upon its surface. The iron that had been exposed by puncturing the nail holes had become coated with zinc—the sheathing was nearly clean, and free from marine grass and animalcules. It appears to have answered very well during the before-mentioned voyage, and the ship has sailed without it being found necessary to do any repairs to it.

PETER COURTENAY, Lloyd's Surveyors.

I. H. RITCHIE, JAMES MARTIN.

The company are prepared to supply all articles required, or execute work of every description.

Wares.—London, at Millwall, Poplar, near West India Docks; Staffordshire, Phoenix and Lea Brook Iron-works; from which corrugated iron, and every description of iron, galvanised or otherwise, can be supplied; also, from the South Wales Works, near Bridgend, Glamorganshire.

Office.—3, Mansion-house-place, London.

CAUTION AND NOTICE.
THIS GREAT PATENT, like every good one, is invaded, and by the law's delays (and its miserable state as regards the interests of patentees), the parties are able to evade the consequences some short time longer. The same thing has occurred with other patents. In Nelson's Hot-Blood Patent, for instance, the law went on for years; but one firm only had at last to pay upwards of (£120,000) ONE HUNDRED AND TWENTY THOUSAND POUNDS PENALTIES. BUYERS as well as SELLERS are LIABLE, and the PATENTEE'S WILL PROCEED AGAINST ALL PARTIES WHO INVADE THIS—one of the most IMPORTANT INVENTIONS ever brought into use.

Actions are proceeding against Messrs. Morewood and Rogers, Messrs. Walker (Gospel Oak), and many others.

The company take this opportunity of giving the most unequivocal contradiction to the advertisement issued by Messrs. Morewood and Rogers on 8th August.

THE PATENT GALVANISED IRON COMPANY.
NOTICE.—The delay in effecting the cancellation of the patent of this company, on the SCIRE FACIAS issued under the fiat of the late Attorney-General, has been owing to the attorney for the company taking advantage of the patentee's absence out of the kingdom, for obtaining the utmost time to appear and plead. When forced to plead, the COMPANY'S ATTORNEY PUT IN A FRIVOLOUS PLEA, FOR THE SAKE OF DELAY; but the Master of the Rolls, on the application of Messrs. Morewood and Rogers, set aside the plea, and only let the patentee in to plead again, on the terms of pleading instantly, or to the merits, and on other conditions.

In the action against MESSRS. MOREWOOD AND ROGERS THE VERDICT STANDS FOR THE DEFENDANTS, and Messrs. Morewood and Rogers wait only the judgment of the court, for the issue of a writ of HABEAS CORPUS FOR THEIR COSTS. In the actions against Messrs. Walker, the plaintiffs have discontinued their suits, and paid Messrs. Walker's costs; and the existing action against them waits the judgment on the *scire facias*. No other actions have been brought, except such as the company abandoned without serving the writs, in order to save the paying of the defendant's costs. So much for the Patent Galvanised Iron Company's misrepresentations and falsehoods, as to proceedings against infringers.

In the proceedings against Morewood and Rogers, and Messrs. Walker, and on the *scire facias*, THE COMPANY HAS BEEN BRUTAL AT EVERY STEP, and it is only while they can delay the proceedings—which they have done to their utmost power from the commencement—they can have the boldness to hold themselves forth as a patent company. But the Master of the Rolls has now tightly tied them down to a short expiry, unless they resort to some new manoeuvre, for the purpose of obtaining delay.

It will be remembered that the company's witnesses, on the late trial, admitted that the company had won only by averring themselves of part of the process of Morewood and Rogers. Messrs. Morewood and Rogers, however, have contented themselves hitherto with the superiority of their own articles, rather than incur expense in suing a company already overwhelmed with litigation and law expenses.

The public will at once perceive that the company, knowing Messrs. Morewood and Rogers' articles to be much superior and preferable to their own, and despairing of success by fair and honourable means, are driven to the necessity of wilful misrepresentation in advertisements, in order, if possible, to effect sales—a course of proceeding much more like the drying throes of a bubble company than the conduct of a respectable mercantile association.

MOREWOOD AND ROGERS, 9, Steel-yard Wharf, Upper Thames-street.

8th August, 1845.

PATENT GALVANISED IRON COMPANY.—NOTICE.
The Attorney-General has given his fiat, and a *scire facias* has been issued to REPEAL THE COMPANY'S GALVANISING PATENT (Sorel's process), which was tried in February last, before Chief Justice Tindal, in the cause of Pattison v. Holland, and was found by the jury to be invalid.—May 9, 1845.

PATENT GALVANISED TINNED IRON.
THE PATENTEE'S beg to call the attention of the PUBLIC to the ABOVE METAL, which is being USED extensively by the LORDS COMMISSIONERS of the ADMIRALTY, the BOARD OF ORDNANCE, and OTHER PUBLIC BODIES.

FOR ROOFING AND OTHER PURPOSES.
The large WAREHOUSES and SHEDS in the LIVERPOOL DOCKS have had the ZINC with which they were formerly covered STRIPPED OFF, for the purpose of being COVERED WITH IT; and the NEW DOCK WAREHOUSES of that city are likewise being COVERED WITH THIS METAL.

It is peculiarly ADAPTED for RAILWAY STATIONS, as forming a light, strong, and incorrodible covering.

THIS PROCESS is the ONLY ONE by which the QUALITY of the IRON is PRESERVED, instead of being injured; and it is, therefore, so very malleable, that it may be worked up with the greatest ease into articles of all descriptions.

Further information may be obtained on application at the WAREHOUSE.

No. 9, STEEL-YARD, UPPER THAMES-STREET.

RYE AND THOMAS, MINE AGENTS AND DEALERS
IN STOCKS, RAILWAY AND OTHER SHARES,
80, OLD BROAD-STREET, LONDON.

MINING AND RAILWAY OFFICES, 16, CORNHILL.
—Mr. RICHARD TREDINNICK having entered into arrangements with PRACTICAL AGENTS and ENGINEERS resident in the several MINING DISTRICTS, whereby he is enabled to obtain the earliest and most accurate information affecting MINING AND RAILWAYS, in the PURCHASE or DISPOSAL of SHARES, as also obtaining REPORTS or STATEMENTS with reference thereto.—Reference as to ability and the facilities possessed by Mr. Tredinnick will be readily afforded; and the strictest confidence preserved respecting all communications.

MINING AND RAILWAY AGENCY OFFICE, LISKEARD.
J. J. TRATHAM AND CO.

In OPENING an OFFICE for the transaction of MINING and RAILWAY BUSINESS in LISKEARD, beg to say, that they pledge themselves to act on commission only, and to obtain for all those who may favour them with their orders, the most favourable terms both in buying and selling.

A DAILY SHARE LIST will always be kept for INSPECTION; and every information connected with MINING and RAILWAY MATTERS furnished to correspondents. J. J. T. and Co. will also be glad to be employed as permanent AGENTS to INSPECT MINES, furnish REPORTS of any improvements or other circumstances desirable to be known by parties residing at a distance. They have also made arrangements for furnishing PLANS of MINE SETTS, with lodges laid down from actual survey; sections of underground workings, and other drawings connected with mining, on the most liberal terms—and solicit the patronage of the public in these branches.—August, 1845.

RAILWAY SHARES AND MINING SHARES, BY PUBLIC AUCTION.—Messrs. LAMOND and CO.'S PUBLIC SALES OF RAILWAY SHARES are held every TUESDAY and FRIDAY, at One o'clock; the MINING SALE every TUESDAY, at Twelve o'clock.—On Tuesday next, the 19th inst., Messrs. Lamond and Co. will have the honour to submit to PUBLIC COMPETITION about THREE THOUSAND RAILWAY SHARES, also the following MINING SHARES—viz.: Tamar, Tincroft, Callington, Coburn, Santiago, Ivy Tor, Wheel Venture, Wheel Benny, Wheel Well Stern Crease, Concord, &c.; also Bank of Australasia, Bank of British North America, &c., as per catalogue—to be had on application.
Hall of Commerce, August 16, 1845.

RAILWAY, SHARES, &c., BY AUCTION.—TO SHARE-
HOLDERS AND CAPITALISTS.—Encouraged by the recent increase of business in the sale and transfer of shares in the various public companies, British and foreign, and acting under the advice of friends and capitalists, Messrs. Lamond and Co., licensed auctioneers, have deemed the additional occupation thus created, together with the abolition of the auction duties, a fit opportunity for opening a separate and independent practice, to which they have determined to devote their undivided attention, declining all other business for this express purpose—viz., "the sale by auction of shares in railways, British and foreign, assurances, mining, cemetery, and canal companies, joint-stock banks, debentures, bonds, &c., &c.," in short, of every description of interest connected with the numerous public companies formed and now forming in the commercial world.
In arriving at this determination, it will be the anxious desire of Messrs. Lamond and Co. to give every information and satisfaction to their friends and the public, and looking at the probable magnitude of operations yielding adequate remuneration, they have resolved to adopt a low scale of ad valorem charges, by way of commission, and where sales are not effected, a small fee, merely sufficient to cover the expenses of printing, advertising, &c., &c., for putting up the lots.

To avoid any misunderstanding, a deposit of 10 per cent. will be required on all purchases at the hammer, unless the same be effected through bankers, members of the Stock Exchange, or parties well known to the auctioneers; and a settlement of the remainder of the purchase-money, must, in every case, be made in the course of the following day, during the usual hours of business, or the sale will be void, and the deposit forfeited, except when special transfers are required, and to such all possible expedition will be given.

As all scrip and share certificates must be deposited for examination at least one day previously to their being offered to public competition, Messrs. Lamond and Co., bankers, and advisers of the operations of the day will be forwarded by the first post after each day's sale, and the proceeds paid according to their correspondent's instructions.

Messrs. Lamond and Co. further propose to take subscriptions of £1 per annum from all parties desiring to have catalogues sent them on the night before the sale, except bankers, members of the Stock Exchange, and subscribers to the Hall of Commerce, to whom they will, on application, be delivered gratis; but, to prevent inconvenient intrusion, no one can be admitted into the sale room without a catalogue, which, if furnished at the door, will be charged 1s.

SCALE OF CHARGES.
One Shilling per Share under £20 0 0
One Shilling and Sixpence under 50 0 0
Two Shillings and Sixpence under 100 0 0
Five Shillings on all above.

And Two Shillings and Sixpence per lot, offered for sale (be the number of shares in such lot more or less) when sales are not effected.

Hall of Commerce, Threadneedle-street, London.

SUSPENSION BRIDGES.—ANDREW SMITH'S PATENT
GALVANISED WIRE ROPE AND CHAIN SUSPENSION, or PARABOLIC TENSION, BRIDGES, are so constructed that the lateral oscillation and vibration (so destructive on the ordinary suspension principle) are entirely prevented by this improvement. For deep ravines or cuttings, the Parabolic Tension Bridge costs much less than those on the suspension principle—piers, &c., being entirely dispensed with.
Drawings and models may be seen, and all necessary information had, on application at the offices, White Lion-court, Cornhill; 69, Princess-street, Leicester-square; or at the works, Millwall, Poplar.

PAYNE'S PATENT PROCESS FOR THE PRESERVATION
AND IMPROVEMENT OF TIMBER, &c.—PAYNE and LODGE beg to invite the attention of Engineers, Railway Companies, Architects, and others, to the ABOVE PROCESS, and to state that they are prepared to ERECT the necessary APPARATUS in any part of the United Kingdom, where the quantity is sufficiently large to warrant the outlay of its removal.—Further particulars can be obtained at WHITEHALL WHARF, CANNON-Road, WESTMINSTER, or at their other stations—
FLEETWOOD-ON-WYRE, LANCAIRESHIRE; UNION WHARF, SOUTHAMPTON, and WISBEACH, CAMBRIDGESHIRE, GUIDFORD, SURREY.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING
AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE FOR MACHINERY AND AXLES of every description.—JOSEPH PEIRCE'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.
References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

BY HER MAJESTY'S ROYAL LETTERS PATENT.
SMART'S ELLIPTICAL CONVEX METALLIC FLOATS,
FOR PROPELLING STEAM-SHIPS.—The very great superiority of this invention over the common float, in all points, having been fully proved by the application to various steamers of from 90 to upwards of 200-horse power—the patentee is enabled, with the greatest confidence, to recommend it to the Government and the public generally, and will immediately attend to all applications for license at his residence, No. 6, Grenville-place, Hotwells, Bristol.—June 19, 1845.
Personal attendance to the fitting (if required), on travelling expenses being paid.

PATENT IMPROVEMENTS IN CHRONOMETERS.
WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 23, Cockspur-street watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6s. each; in gold cases, from £3 to £10 extra. Gold horizontal watches, with gold dial, from 3s. to 12s. each.
DENT'S PATENT DIPLIODESCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.
J. MURDOCH (successor and late assistant to Mr. Hebert) informs INVENTORS and PATENTEE'S, that at his OFFICE they can obtain
REFERENCE TO A CLASSIFIED LIST OF PATENTS,
THE ONLY ONE EXISTENT, which shows at one view all the Patents ever granted for a particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.
SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.
FINISHED and WORKING DRAWINGS executed with accuracy and despatch.

NOTICE TO INVENTORS.—OFFICE FOR PATENTS
OF INVENTIONS AND REGISTRATIONS OF DESIGNS, 14, LINCOLN'S INN-FIELDS.—The printed INSTRUCTIONS gratis, and every information upon the subject of PROTECTION for INVENTIONS, either by Letters Patent or the Designs Act, may be had by applying personally, or by letter, pre-paid, to Mr. Alexander Prince, the office, 14, Lincoln's Inn-Fields.

GREAT NORTH AND SOUTH WALES AND WORCESTER RAILWAY COMPANY.

(Registered Provisionally, as required by Act 7 and 6 Vic., c. 110.)
Capital £2,000,000, in 100,000 shares, of £20 each.—Deposit £1 per share.

PROMOTERS.

Sir John Conroy, Bart. Llanbrynmair, Montgomeryshire
W. Watkin E. Wynne, Esq. Penarth, Merionethshire
John Vaughan, Esq. Penmaen Dorey, Merionethshire
Richard Matthews, Esq. Esgarwlad, Merionethshire
T. Price Anwyll, Esq. Hengal, Dolgelly, Merionethshire
Lewis Owen Edwards, Esq. Glyn-ar-ardd, Merionethshire
Thomas Hartley, Esq. Llwyn, Merionethshire
Reginald Fowden, Esq. Arthor, Merionethshire
Charles T. Thurston, Esq. R.N., Talgarth, Merionethshire
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John Davies, Esq. Fronhemlog, Merionethshire
John Rowlands, Esq. Tall-y-llin, Merionethshire
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David Pugh Evans, Esq. Fronfelen, Montgomeryshire
Edmund H. Wynne, Esq. Brynllwydwin, Montgomeryshire
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T. R. F. Wagner, Esq. Mance-elyd, Cardiganshire
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John Beynon, Esq. Adpar House, Cardiganshire
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James Bowen, Esq. Troedyrfaur, Cardiganshire
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Mark Anthony Saurin, Esq. Kilwendeg, Pembrokeshire
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John Russell, Esq. Risa, Carmarthenshire
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Richard Harman Lloyd, Esq. 60, Lombard-street, London
John Francis Bacon, Esq. Austinfriars, London
The Rev. David Robinson, Brompton
Henry Cornfoot, Esq. Copthall-court, London
John Barclay, Esq. Jeffrey-square, London
Robert Hart, Esq. Middle Temple, London
W. W. Mansell, Esq. Dorchester-place, Blandford-square, London

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Robert Blayney, Esq. Henry Cornfoot, Esq.
Evan W. Morris, Esq. Robert Rising, Esq.
John Francis Bacon, Esq. W. W. Mansell, Esq.

ENGINEERS.—John Wright, Esq.

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The Commercial Bank of London, Lothbury
Bristol.—Messrs. Miles, Harford, and Co.
Bath.—Messrs. Tugwell and Co.
Birmingham.—Messrs. Taylor and Lloyds
Manchester.—Messrs. W. Jones Lloyds and Co.
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Dolgelly.—Humphrey Lloyd Williams, Esq.
Machynlleth.—Hugh Davies, Esq.
Aberystwyth.—Messrs. James Hughes and Roberts
Carmarthen.—Richard Gardner, Esq.

LAND SURVEYOR.—Francis Fuller, Esq. Parliament-street.

SECRETARY.—Capel Hanbury, Esq.

OFFICES OF THE COMPANY.—7, ST. MILDRED'S-COURT, POULTRY, LONDON.

PROSPECTUS.

The proposal for a line of railway, intended to connect the north and south of the principality of Wales, and to be the most direct route, and to attain at the same time the best point of communication to London and Birmingham, has been decided upon, after full consideration of the practical engineering facilities for effecting both these important objects in the most certain and economical manner; and also, after consulting the views and interests of the principal landed proprietors and inhabitants of towns and seaports in that part of the kingdom. It is with the most careful attention to these objects of paramount interest that the project is submitted to the public, for a line through a country of great natural resources, which is at present wholly unprovided with a railway, or other means of inland communication.

The railway is proposed to be made with a view to its forming a junction in the most central part of England with the established or projected railways to London, Bristol, Birmingham, Manchester, Liverpool, and the north. It is certain that a line will soon be made, which commencing near the city of Worcester, proceeding in a north-west direction, by Ludlow to Newtown, and crossing the first range of the Welsh mountains, will be carried through the Vale of the Dovey northwards, probably in the direction of Dolgelly, Harlech, Tremadoc, Porthmadoc, and Carnarvon.

The line proposed by this company will first be commenced from a point on the Dovey, and proceed through Machynlleth, to the seaport town of Aberystwyth, thence ascending the River Ystwyth it will be carried at an easily accessible point into the Valley of the River Tevi to Tregaron, Lampeter, Newcastle-Emlyn, and Cardigan, and by a branch continued to Carmarthen, where it will afford the means of junction with the projected South Wales and Welsh Midland Railways—thus affording also the most accessible and direct communication with other principal harbours of Cardigan Bay—viz., Fishguard, Newport, New Key, Aberarou, Aberdovey, and Barmouth. It is, however, the intention of this company, in the event of its becoming necessary, to make arrangements for ultimately securing the formation of the line to be continued, in any event, from Machynlleth northwards to Dolgelly, Harlech, Tremadoc, and Carnarvon.

The distance of the line first proposed to be made will be eighty miles. If continued to Carnarvon, it will include an entire line of nearly 130 miles. The principal objects of the undertaking may be thus briefly enumerated:—The establishment of a perfect line of railway between the Menai Straits, and the ports and harbours of Carnarvon and Cardigan Bays (which comprise the entire western seaboard of North and South Wales), and also all the principal towns, mines, and quarries in the several counties of Carnarvon, Merioneth, Montgomery, Cardigan, Pembrokeshire, and Carmarthen, with the immense advantage of a speedy certain inland communication, thereby secured from the Bristol Channel, Swansea, Milford Haven, and the Pembroke dockyards, to the port of Liverpool.

The facility of the most desirable and rapid means of transport for the great and increasing traffic in slates, iron, lead, and copper ores, coals, lime, timber, cattle, and other live stock, and every description of agricultural produce, which already exists to so large an extent, but which will receive an immense impulse from the convenience and economy of this line of railway. The benefit to the flanne trade of North Wales which will be increased, and the cost price of that necessary staple manufactured article reduced, with augmented benefit to both buyer and seller by the advantage of railway transit.

The owners and lessees of the rich and important mines and quarries of North Wales anxiously desire a cheaper and better communication with the central and southern districts of the principality, to which their minerals will be conveyed in exchange for coals, iron, copper, lime, glass, earthenware, and various other important articles of produce and manufacture, which the latter have the means of supplying in abundance at moderate prices. The interests and prosperity of both will be still further advanced by the most direct transit of their respective products to Birmingham, and the central cities and market towns of England; to Manchester, Liverpool, and the north; to Bristol and Gloucester, and to London, in exchange for hardware, silks, cotton, and woollen goods, hosiery, wines and spirits, and groceries.

The returns of lead ore, slates, coals, and lime, will alone show an enormous traffic. The Bay of Cardigan abounds with oysters and fish of every kind, and the imports from Ireland into the several ports and harbours, extending over nearly 300 miles of deeply indented sea-coast, are already extensive, and must be greatly increased by such a facility of traffic, to the mutual advantage of the principality and of Ireland. It may further be remarked that at Aberystwyth and Fishguard great natural facilities for improvement in the means of communication by steam-boats with Ireland already exist, and only require a sufficient impulse to insure their extension.

The harbour of Aberystwyth alone, owing to a skilful and judicious improvement by the erection of its noble pier, has within the last six years been permanently deepened by several feet of water, its bar has almost disappeared, and it has afforded thereby a safe and accessible port of refuge to numerous vessels driven into it by stress of weather in the Irish Channel. It has also more than doubled within the same period the amount of its receipts for harbour dues and other fiscal charges, from the still increasing number and burden of the ships frequenting it. It is, therefore, contemplated to take powers for the further improvement of that and other harbours on the coast, by means of a limited outlay by the railway company. The profitable cultivation of many thousands acres of good convertible land, now lying barren, will be insured by the introduction in abundance, at a moderate cost, of lime, an article so essential but now scarce, owing to the heavy carriage of land carriage, for distances often exceeding forty miles.

The increased consumption of manufactured goods from the northern and central parts of England will insure an increased traffic in goods and passengers, and the cheaper supply of salt and various other natural products now much required, will also give an im-

pulse and profitable activity to the manufactures, agriculture, fisheries, and maritime interests of Wales. The land required for the formation of at least two-thirds of the line is of so little intrinsic value, being mostly waste or sheep walk, that one principal and usually overwhelming item of the cost of a railway is diminished to within the smallest reasonable estimate. Another remarkable advantage is, that the quantities of valuable slate and stone to be excavated will afford materials of the most useful nature for the purposes of the railway. It is proposed to take land sufficient, and to make the bridges wide enough for a broad gauge line; but it has been determined not to decide the question of the gauge to be adopted, until after a final report of the engineers is made.

Upon the important subject of traffic, the particulars collected from peculiar sources of private local information, and the investigations which have been pursued and are now progressing, warrant the conclusion that this railway is not only likely to return a remunerating revenue to its shareholders, but also, that it calculated to afford, in an eminent degree, great advantages as well as convenience to the public. It is well known that thousands of travellers and tourists annually visit both North and South Wales in search of health, or for relaxation of mind, which the breezy air and romantic scenery of that beautiful country seldom fail to afford, and that such visitors come principally from the northern and midland counties. It is quite impossible to form any definite calculation of the increase of passenger traffic by the additional visitors to Towyn, Barmouth, Aberystwyth, or through Carmarthen to Tenby and Swansea, and other watering-places and favourite spots throughout the principality.

The astonishing increase of passenger traffic from London to Brighton, Dover, and Southampton, since the establishment of railways to those places, appears to warrant the certainty of a great addition to the number of travellers to North and South Wales, when similar facilities are presented by the line now proposed.

Power will be applied for to sanction, by the Act, the allowance of interest at 4 per cent. on all deposits from the time of the first call being made until the line is opened. The subscribers will be held liable only to the extent of their first deposits until an Act of Parliament is obtained, and afterwards only to the amount of their subscriptions.

Until an Act of Parliament shall be obtained, the affairs of this company shall be under the control of the provisional managers, to whom power is given to allot the shares, and to apply the funds of the company in payment of the expenses incurred in its formation, and in the preparation of the plans and sections to be submitted to Parliament.

Power will be applied for in the Act—and in the meantime is hereby given to the provisional managers—to raise an additional capital; to abandon any part of the line, to make branch lines, or enter into arrangements with any other company or companies; and also to nominate the first directors of the company. The Parliamentary contract and subscribers' agreement will be ready for signature on payment of the deposits.

Applications for shares may be made to the solicitors or local agents, or to the following stock and sharebrokers—viz., Messrs. Shewell and Son, Tokenhouse-yard, London; Mr. J. W. Scott, Bartholomew-lane, London; Messrs. Lloyd and Price, Liverpool; Messrs. Radford and Son, Manchester; Mr. Henry Rudge Hall, Bristol; Mr. Thomas Sanford, Exeter; Mr. J. R. Lane, Birmingham; and Messrs. Tempest and Butchart, Huddersfield; of whom prospectuses and maps may be obtained. Such applications to be made in the following form, with a respectable reference to—

To the Provisional Committee of the Great North and South Wales and Worcester Railway.

Gentlemen,—I request you will allot me shares in the above company, and I hereby undertake to accept such shares as may be allotted to me, on the terms of the prospectus, and to pay the deposit thereon, and also to execute the Parliamentary contract and subscribers' agreement when required.—Dated this day of 1845.

Name of applicant

Address in full

Profession or trade

Name of reference

Address

By order, J. HODGSON, Secretary.

Offices, 39, Poultry, August 8, 1845.

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MINING REPORTS OF THE NINETEENTH CENTURY.

As a sample of reports on mines, which are occasionally made by the gentry, who designate themselves mining engineers and mineral surveyors, we present to our readers this week a perfect treat, and doubt not they will give us full credit, and duly appreciate the valuable and highly interesting document which we have so fortunately stumbled over in our researches on the Welsh hills. The report, which will be found subjoined, purports to define the mineral products of a tract of ground in the locality of Dinas Mowddwy, in the vale of Cowarh, North Wales, where, we learn, that lead veins and slate quarries, with a dash of copper ore, exist, and hold out the promise of vast returns to those who may be fortunate enough to obtain them. The report, it will be observed, after speaking of a dyke of slate east and west, of two miles in length, states—"That the set is intersected with lead lodes and branch veins in every direction, and the lead is to be seen on the face of the mountain in at least seven lodes, or veins, varying from two feet to ten feet in width; and there are upwards of ten other lodes unexplored, running north and south and east and west." By which we are led to suppose, that the lodes in this part of the country, like the author, are not at all particular as to where they go, or to what extent; for, as the report says, there are—"branches in every direction." We should have thought this moderately well as a beginning; but the advantages of this set are so inexhaustible, that we do not appear yet to have come to the cream of them (or the joke), as will be seen further on, if we are to adopt his theory as to the produce of this splendid assemblage of lead and copper lodes, for the veins seem to be perfectly as ubiquitous as they are variable in their produce and directions. It would appear quite clear that, running to and from every point of the compass, and producing every sort of metal, *ad libitum et nauseam*, these mineral lodes hold out great expectations, but it is only right the author should speak for himself; thus, quoth he—"As the lead ore found in the north and south lodes is much impregnated with copper, near their junction with the east and west lodes, I have no doubt but that they will prove very rich for copper in depth." This is certainly very rich, whatever the lodes may prove; for there can be no doubt of the richness of the inventive faculty that could have come to such a conclusion on such premises, but that they will be rich in depth is another sort of question. To prove which, however, the author has furnished us with further arguments, among which we find the following:—"Lead lodes are generally found running north and south, and copper lodes, east and west; therefore, it is my opinion that the east and west lodes will only make lead shallow, as the lead being found at all is in consequence of the lead oozing out from the north and south lodes, and crystallising, or forming, in the east and west lodes." Shade of Werner! we really cannot stand this; it is positively too much for us—it is, as Mrs. Caudle would say, *cruel*! Did this reporter on lead mines ever happen to pass through Cardiganshire or Derbyshire? because, if so, we should be glad to know in what part of the country he made the observations that laid down the basis for this general rule. We are aware that lead is found in some of the cross lodes of Cornwall, but we confess ourselves unprepared to adopt the conclusion come to on this point by the author—viz., that the reason the lead is found at all in the east and west lodes, is in consequence of its oozing out from the north and south ones; but, if a doubt could exist in the minds of any sceptic, a reference to the illustrated map, or lithographed diagram, which has been submitted to us, would at once determine the point. We had supposed, in our innocence, and reasoning, from the evidence evinced in the Dinas Mowddwy district, and the one immediately adjoining it on the south, extending in that direction for upwards of twenty miles, including the large east and west mines of Esgargale, Dyfngwm, Esgar Hir, and Esgar Fraith, the last of copper and the first of lead on the same lode, which is east and west. Cwmystwith, Cwmymlog, Goginan, Darren, the Lisburne mines, and Esgar Mwyn, bearing lead from the top of Plenllymon to the level of the sea, that the reasonable conclusion to come to would be just the reverse of our engineer's opinion, who would have us suppose, that lead in this country is generally formed in the north and south veins, being merely ninety degrees? Albeit, we do not intend to dispute that the Dinas Mowddwy veins will not be found to make lead shallow—and, possibly, they may be even as shallow as the reporter—although we must deny the existence of anything in the reasoning, which would lead us to the conclusion, that "there is no doubt that they will prove very rich for copper in depth," for, on the contrary, or *vice versa*, we consider this to be just as hypothetical a speculation as any splendid geologist could wish to arrive at. But, let us proceed; we have, we find, a stronger reason for the lower portions of the east and west lodes being full of copper, for, our author says, "I am strengthened in my opinion as to many of the east and west lodes proving rich for copper, by the circumstance, that the pool at the foot of Arran Mowddwy, E, and also the pool near D, on map, is so highly impregnated with mineral water, that fish cannot exist in them, nor in the streams which flow from them, till they are diluted by other streams, and the gravel and stones in the stream from Arran pool towards Llanymowddwy are covered with a metallic appearance strongly indicative of copper." Now, if this is not strong enough to induce any body to invest money in looking for a body of copper, we must say we never did hear nothing that would. Why, the very stones prattle of it, and several of the fish, which have been subjected to a chemical analysis, have been found to be strongly impregnated, in the immediate regions of the liver, with the arseniate of copper; but, we shall find, there are still further inducements in store for the speculative capitalists by following this interesting document, and such, one would think, as no reasonable and enterprising miner would be found "innocent" enough not to take advantage of: "the fact of the Graigwin lode, which has produced rich silver-lead ore, about half a mile west of this set, running through this set two miles and a half in length, is sufficient of itself to warrant any outlay of capital." The report does not state exactly the quantity of this rich ore, which has been raised from the celebrated Graigwin lode, or that the whole length of the lode is one mass of ore throughout the grant, but it does state, that it is scarcely possible to drive 500 feet in any direction in this favoured land, without cutting a lode or vein of lead. In the name of all that is conjecturable, what do people want, if they will not invest their money upon such a certainty as this? Do they wish to have the lodes, mountains, and all, brought to London, when they can have a report, with diagrams, so admirably calculated to render any understanding of the matter so interestingly difficult to comprehend?—we should think not. A schedule, or list, of nineteen lodes is then added, describing their length, thickness, and nature of metal, several, however, being represented as unknown, and, therefore, incapable of being described. There must, however, be one more somewhere, we are convinced, and, by a diligent search, no doubt it will be discovered. We cannot close our remarks upon this report, without referring, in sober seriousness, to the absolute absurdity which it presents on its face; for, while we treat the report lightly, we would wish to impress on our readers the importance which is to be attached to reports, when made by incompetent parties. We could well fill some half dozen columns, but as we present the report itself, we can well imagine our readers will find amusement, if not instruction, while we would recommend those whose office it is to write mineral reports, to study probability, and not indulge in descriptions so entirely imaginary as the one before us. We are aware that there is a mine working on this ground, with fair prospects of success, on which we congratulate the proprietors, but this is altogether a different matter from the magnified accounts presented in the report before us:—

Report on Dinas Mowddwy Lead Mines and Slate Quarries.

These mines are situated in the vale of Cowarh, in the parish of Llanymowddwy, North Wales. The set, or mine take, extends over upwards of 2000 acres, and is about two miles and three-quarters in length, and one mile and a quarter in width; the strata is clay slate, of different degrees of hardness, with a valuable dyke, or channel of slate, running through the set nearly east and west, upwards of two miles in length, which will produce slate and slabs of large dimensions of the best quality, and about 200 feet in width. The set is intersected with lead lodes and branch veins in every direction, and the lead is to be seen on the face of the mountain in at least seven lodes or veins, varying from two to ten feet in width, and there are upwards of ten other lodes unexplored, running north and south and east and west, with branches in every direction, and as the lead ore found in the north and south lodes is much impregnated with copper near their junction with the east and west lodes, I have no doubt but that they will prove very rich for copper in depth, as lead lodes are generally found running north and south, and copper lodes east and west; therefore, it is my opinion, that the east and west lodes will only make lead shallow, as the lead being found at all is in consequence of the lead oozing out from the north and south lodes, and crystallising or forming in the east and west lodes—at all events, whether the lodes make lead or copper, they are very promising, and to a certainty, from their size and general formation, cannot fail proving rich; for, though I have surveyed the whole mining district of Cornwall, and numerous mines in Devon and Derbyshire, I have never seen such a mass of lodes intersecting each other in every direction as this mine set presents, extending as it does over 2000 acres; it is scarcely possible to

drive 500 feet in any direction without cutting a lode or vein of lead, and the fact of the rich "Graigwin lode," which has produced rich silver-lead ore about half a mile west of this set, running through this set two miles and a half in length, is sufficient of itself to warrant any outlay of capital; but when there are beyond all question so many rich lodes or veins intersecting it, north and south, and east and west, every encouragement is given for the investment of capital, as the chances of success are multiplied in the same ratio, and I am strengthened in my opinion as to many of the east and west lodes proving rich for copper, by the circumstance that the pool at the foot of Arran Mowddwy, E, and also the pool near D on map, is so highly impregnated with mineral water that fish cannot exist in them, nor in the streams which flow from them, till they are diluted by other streams, and the gravel and stones in the stream from Arran pool towards Llanymowddwy are covered with a metallic appearance strongly indicative of copper. A reference to the sketch map of the set and numerous lodes will give an idea of the numerous lodes which intersect it, and it will be seen that, by driving a level or adit on the vein of slate, a great number of lodes will be intersected at the least possible expense, and by continuing the adit across the set on one of the north and south lodes, all the other east and west lodes will be intersected, so that it is quite impossible to conceive a more advantageous set, as to facility of working, and general position of the mine, than the Dinas Mowddwy Consolidated Mines present, as the deep adit will, if necessary, drain the mine 1000 to 1800 feet below the surface of the mountain, without any cost of machinery—a thing rarely to be met with, and will prove a saving of an outlay of full 2000*l.* in engines, and 1000*l.* per annum cost as compared with mines of the same depth in Devon and Cornwall. The following short description of the lodes proved to contain lead, and others visible which contain either lead or copper, must suffice, till the lodes have been opened, and their contents ascertained.

- No. 1. To be seen in Craig, supposed lead.—No. 2. Ditto.
- No. 3. Ditto, and has been worked by the ancient miners by a short level driven on the lode, which contains lead, and is very promising. Lead is found laying about on the surface of the mountain, washed down from the craig.
- No. 4. A very large lode, full of lead.—Nos. 5, 6, and 7. Ditto.
- No. 8. This lode has been recently worked; two levels are driven, a shaft sunk upwards of sixty feet, and the lode very rich; lead worth 82 per cent., and 6 oz. of silver to the ton.
- Nos. 9, 10, and 11. Large champion lodes, running north and south, to be seen in the craig. Nos. 9 and 11, not proved, supposed to be lead. At No. 10 lead to be seen at intersection of brook.
- No. 12. Supposed to be lead, not proved.
- No. 13. Lead lode very large and strong.—Nos. 14 and 15. Ditto.
- No. 16. Large, fine-grained, silver-lead, has been worked about half a mile to the west of this set at Craigwin, and makes very rich lead; out to the surface of the mountain, it dips or underlays north, and from the appearance of the ore is worth 30 oz. to 40 oz. of silver to the ton of ore; this rich lode runs through the set upwards of two miles in length.
- Nos. 17, 18, and 19. are very large lodes untried, and are doubtful as to whether they are copper or lead; they dip east, and are to be seen running all down the craig at Arran Mowddwy, 1000 feet deep or more; there are numerous other lodes which I have not had time to investigate, and which must be embraced in my general report, which will accompany my large plan and model of the set, showing all the lodes.

CONTINENTAL METALLIC INDUSTRY.

A commission was lately formed, composed of Messrs. Berthier, Dumas, and Becquerel, to examine into the merits of a Treatise, presented to the Academy of Sciences, in Paris, by Messrs. Gaultier de Claubry, and Dechaud, "On the Electro-Chemical Treatment of Copper Ores." It appears that, nine years ago, these scientific gentlemen announced to the Academy of Sciences that they had succeeded, by the means of a very simple electro-chemical process, to extract gold, copper, and lead from their respective ores, without having recourse to a voltaic apparatus, but simply in employing an apparatus worked with iron and zinc.

First of all, this process requires the transformation of the ore in a soluble composition, or liquid, which is easy to be obtained in the place of working, as it is only in these cases that electric force can act to separate the metal from its combinations. If it is copper ore, such as the carbonate, the oxide, sulphur, or double sulphur, which are the most common, they transform into sulphate the two first with sulphuric acid; and the two latter in roasting them—an operation which is performed to great advantage in Mexico, by the preparation of the *magistral*, an indispensable agent in the amalgamation in patio. When once the sulphuration has taken place, the ore is washed, and the solution is submitted to the decomposition electro-chemical, in very simple apparatus. If they wish to obtain the copper in blades, or sheets, the apparatus must be so arranged, that the solution may always be at its maximum of saturation. Messrs. Gaultier de Claubry, and Dechaud, have succeeded in performing this by the most simple process, as follows:—When they place under, in a vase, two solutions, the one saturated with strong sulphate of copper, the other sulphate of iron, not so strongly impregnated; if in the first one, they place a sheet of copper, in the other a blade of cast metal—communicating with the first one by means of a metallic conductor, there will be obtained a voltaic couple—the action of which is sufficient to decompose the sulphate of copper; the oxygen and the sulphuric acid operate on the cast metal, from which results the sulphate of iron, whilst the copper deposits itself, or adheres to the sheet of copper—forming the negative pole. The copper deposited at first is in the purest chemical state, but the iron becoming more and more abundant, the copper, in precipitating, carries with it iron; it becomes by degrees fragile, afterwards pulverulent, or powder, according as the solution becomes weakened. Whilst this solution decreases in density, that of the sulphate of iron, on the contrary, increases in density, the result is—1. A solution of the normal copper, which occupied the lower part of the vase; 2. A solution of the same salt, less dense, and swimming on the first; 3. A solution of sulphate of iron, very dense; 4. Another normal solution. To remain in its primitive state, and to obtain the copper in leaves, it was necessary to take off the solution of sulphate of copper less dense, and that of the sulphate of iron more dense; it is in this consists the principal improvement of the treating of the electro-chemical process of copper ores by the above-named scientific gentlemen.

Their apparatus is composed of the following:—A wooden case lined with lead, covered afterwards with wax, or any other greasy substance, so as to receive the solution of the sulphate of iron. This case is provided with two apertures; the one above for the introduction of the normal liquor; the lower one serving to expel the dense liquor by means of syphons, or cocks. In the interior, at suitable distances, are placed the boxes, in copper or cast-iron, lined with lead, of which the extremities, or the lower part, is in metal, whilst the outer part is open, and covered with a strong sheeting of pasteboard. An underneath opening leads also by the means of syphons to the concentrated solution of copper, and another one placed nearly on the upper part, permits the running off the weaker solution. In these cases are placed the neutral metal destined to receive the deposit of copper, and between each of them, as well as in the exterior of the two outward cases, are the cast plates that are to produce the voltaic action. Metallic conductors are used to establish the communication between the double parts; and the apparatus is so arranged that at each time there arrives as much of the strong solution of the sulphate of copper as the weak solution of iron, so that the action continues without any great labour. When once the apparatus is got up, it only requires that the leaves of copper should be taken off when they are thick enough, and to replace the metallic plates when they have been dissolved. The running of the liquid is operated by means of the syphons as regards the flowing of the basin, and it is of very little consequence what the cast metal may be, as the worst sort is equally useful. The leaves of copper can be sent immediately to market; and, if passed through the flattening machine, they become equally as hard as the generality of copper that has undergone that process. All the copper that is precipitated is not obtained in leaves or sheets, as there is only about three-fifths, and even the half; the remainder is in a pulverised state, or fragments, that undergo melting. The electrical-chemical process for treating of copper ores by the improved method of Messrs. Gaultier de Claubry and Dechaud, appear to present great advantages over the former methods; but, it is requisite that these ores should be transformed entirely, and that at a low expense, into sulphates, as the main point is there. If these facilities can be obtained, there is very little doubt of the successful issue of the method.

LAMIVET MINE.—(From a Correspondent).—The agents at the mine have noted within the last few days considerable improvements in the 60 fm. level, one of whom says—"I really believe we have a good and great mine before us."

FORTUNATE SPECULATOR.—A worthy tailor of Liskeard lately made a suit of clothes for a person who had speculated in South Caradon Mine, and presented his bill in due course, but was provoked to find the debtor was not in a position to pay. Finding the latter party was about to leave England, the creditor dunned him for the amount. As the last resource, the debtor exhibited to him two shares in the then new mine, and said "Take that or nothing; it may be worth your while some day!" The tailor laughed at the payment offered, but "pocketed the affront," and rejoices now to find himself the fortunate possessor of the shares.

THE RAILWAY SESSION.—During the last session the committees of the Houses of Parliament on railway schemes, sanctioned the construction of 2090 miles of new railways in England, and 560 miles in Ireland, the amount required to be raised for the English lines is 31,680,000*l.*, and Ireland 6,800,000*l.*, forming the enormous sum of 38,480,000*l.* This gives for the English lines an average of 15,000*l.* per mile, whilst the existing lines is calculated at the rate of 30,000*l.* per mile. By a return it appears the annual revenue now derived from railways is about 7,000,000*l.* sterling. If anything can show the speculative enterprise and industry of Englishmen and the wealth of this country, it is the above, as capitalists have no channel to invest their funds in to advantage, unless in railway undertakings or mining operations, either at home or abroad.

THE ANGLO-BELGIAN RAILWAY COMPANY.—The able and well-digested prospectus of this company appeared at full length in our last. The following is an epitome of the principal points:—

CONSTITUTION AND OBJECT OF THE COMPANY.—The object contemplated by this company is to complete the existing modes of inter-communication, by railway and canal, throughout Belgium, in every instance wherein the undertaking offers a fair and legitimate remuneration for capital expended, and in which the project shall have obtained the sanction of the Belgian Government.

CONCESSIONS ACTUALLY OBTAINED.—The magnitude and importance of the grants already obtained by this company, or for which they are in treaty, will require a capital of at least 3,000,000*l.* sterling. For the present, the subscription is limited to the amount required to carry out the grants already sanctioned in the last session of the Legislative Chambers, reserving the faculty of creating additional capital as may be required for the grants to be successively obtained by the company. The concessions sanctioned in the last session are—1. The line of railway from Manège, a point in the state line of railway between Charleroi and Brussels, through the rich coal field of "the Centre," to the river Sambre, at or near to Erquelines, on the French frontier. The length of the line is about fifteen English miles. 2. The concession of a canal from Mons to the Sambre at Erquelines. The short canal, by effecting the junction of the canal of Condé with the Sambre, will unite the basins of the Meuse and the Scheldt, and thus complete this water-communication from Paris to Antwerp, Holland, and the north of Germany. By the law ratifying the concession of the railway and the canal to Erquelines, is also granted the preferential right to any line of railway that may hereafter be projected from any point on the Belgian state line in the direction of the Sambre. Treaties are pending for several lines of railway in East Flanders and other parts of Belgium, the particulars of which will be announced in due time.

GENERAL CONDITIONS OF THE GRANTS.—1. The concession of the Railway and the canal is for a period of ninety years for the railway, and of eighty years for the canal. The stipulated period for the completion of the railway is two years, and for the canal three years. The grant comprises the free appropriation of the water and the bed of the river Trouille, which runs nearly parallel with the course of the canal throughout its entire length. The upper part of this stream flows through a succession of ravines of great depth, forming a series of natural basins, and capable of being readily converted into reservoirs of immense capacity, by simply damming up, as the sides are the natural rock. The immense head of water thus obtained will not only insure the easy and regular supply of water in the upper level of the canal at all seasons, but the enormous power of a fall of nearly sixty feet may be turned to good account for various manufacturing purposes, and the reservoirs might even supply the city of Mons with water, to the height of the upper floors of the houses. 2. These grants are wholly exempt, during the entire period of the concession, from the payment of any toll, passenger duty, or in short any species of tax or impost whatsoever, either to the state or the province of Hainaut, or the communes traversed, in respect of the works themselves, or of the land occupied as the site of them. This is of itself an immense advantage to the company, or rather to the public, upon whom these imposts are ultimately levied, in the shape of a higher rate of charges for the transport of passengers and merchandise. 3. The tariff allowed to be taken on the canal is the highest actually charged on any canal in the kingdom of Belgium; the tariff on the railway is the same as that fixed for all the other railways, with the exception of that on coal, on which an addition of one-eighth over and above the ordinary tariff on coal is permitted to be taken.

CONDITIONS OF THE SUBSCRIPTION.—The "concessionaires," or grantees, have defrayed the expense of surveying, engineering, law, consulting, agencies, and all preliminary costs and charges whatsoever incidental to the obtaining the grants and up to the final ratification of them by the Legislature. They have also provided the caution money required by the Belgian Government, as a guarantee for the *bond fides* of the engagement, and of the completion of the contract. They are responsible to the Government for the carrying out of the undertaking—a responsibility from which the permission to form a *Société Anonyme*, or Joint-Stock Company, does in no way exonerate them, although each individual subscriber or shareholder in such a company is liable only to the amount of his subscription. The grantees, in the consideration of conveying to the public all their rights and privileges, stipulate for a commission of 3 per cent. upon the capital of the concessionaires sanctioned, and to be sanctioned by the Belgian Government. They propose, moreover, that, after defraying all costs and charges ordinary and extraordinary of the year, the net surplus profits of the undertaking shall be divided as follows:—1. A first dividend after the rate of 5 per cent. per annum upon the capital expended shall be paid to the shareholders, and one-quarter per cent. in lieu of a sinking fund. 2. Three-twentieths shall belong to the "Fondations," or their representatives, in the nature of a variable annuity. 3. The remaining seventeen-twentieths shall be distributed *pro rata* among the shareholders, in the nature of a second dividend. The present capital (first series) is limited to 640,000*l.* (16,000,000*fr.*), in 32,000 shares of 20*l.* each, for the immediate operations of the company. One-half is appropriated to Belgium and France, and the other half to England. Additional capital will be called for, commensurate with the grants successively to be obtained. Each succeeding grant will be amalgamated with the first; so that a shareholder in the first series will be, as of right, a shareholder in all the operations of the company. The grantees, in the consideration of conveying to the public all their rights and privileges, stipulate for a commission of 3 per cent. upon the capital of the concessionaires sanctioned, and to be sanctioned by the Belgian Government. They propose, moreover, that, after defraying all costs and charges ordinary and extraordinary of the year, the net surplus profits of the undertaking shall be divided as follows:—1. A first dividend after the rate of 5 per cent. per annum upon the capital expended shall be paid to the shareholders, and one-quarter per cent. in lieu of a sinking fund. 2. 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TO RAILWAY PROPRIETORS AND OTHERS.—The ADVERTISER is in WANT of TWO or THREE HUNDRED TONS of OLD WROUGHT-IRON RAILS, AXLES, and SCRAP. Apply to EDWARD HILL, Brickley Hill Iron-Works, near Dudley.

PROSSER'S EXPERIMENTAL RAILWAY AND BURNETT'S PATENT.—The attention of Railway Companies, Builders, and others, is respectfully called by the proprietors of Sir William Burnett's Patent, to the WOODEN RAILS LAID DOWN AT PROSSER'S EXPERIMENTAL RAILWAY ON WIMBLEDON COMMON; which, having been prepared by their process, in addition to being effectually preserved from dry-rot, will be found to exhibit the characteristics of thoroughly seasoned timber, although only cut down in the month of May last, and prepared in a perfectly green state.

ELECTRIC CLOCKS AND IMPROVED ELECTRIC TELEGRAPHS.—ALEXANDER BAIN, the Inventor and Patentee, begs to acquaint RAILWAY DIRECTORS, and the PUBLIC generally, that he has, after several years' experimental application, PERFECTED the above INVENTIONS; and he can now state, with confidence, that his ELECTRIC TELEGRAPHS greatly surpass in simplicity, combined with efficiency and economy, everything of the kind yet offered to the public. The expense will be generally under £50 per mile, exclusive of instruments, which will cost £12 per station. The Electric Clocks are exceedingly well adapted for railway stations, as well as for public buildings, offices, and private houses, as they keep the most accurate time, and require neither winding nor repairs, but are kept continually going by constant currents of Electricity, derived from the earth.—Address, ELECTRIC CLOCK AND TELEGRAPH MANUFACTORY, EDINBURGH.

THE TWO DIRECT MANCHESTER RAILWAYS.—In the Mining Journal of last week we observed upon the comparative merits of these two projects, so far as the TRAFFIC was concerned. We had intended this week to have adverted to some other subjects, which we postpone, inasmuch as we have received a communication from Mr. Ashurst, the solicitor to "The Direct," which occupies a large portion of our columns to-day. This document is an interesting one for the railway world. Mr. Ashurst states, "as an objection against Remington's line, in an engineering point of view, 'that it required, at one place, an embankment eighty-one feet high, and three miles long, and would have taken eighteen years to form it.' And, as objections in a public view, Mr. Ashurst states, that, in 1840, Mr. Remington asked four millions to make his line; at another time three millions—then five millions; that, in May of this year, he advertised it for two millions; and that, in 1844, he issued a prospectus for a 'Direct London, Manchester, and York Railway,' for which he required seven millions; and Mr. Ashurst, upon these facts, justifies himself and the trade, or, in other words, the 'Direct Company,' in not committing their interests to Remington's line, and in forming the 'Direct London and Manchester Railway,' and having 'the line surveyed for themselves.' We shall refer to the subject again next week.

GREAT NORTH AND SOUTH WALES AND WORCESTER RAILWAY.—This line of railway, which we noticed in the Journal of the 2d inst., is intended to unite the various harbours and ports on the west coasts of North and South Wales, from Carnarvon, opposite the Isle of Anglesea in the north, to Carmarthen in the south, and by a branch to Cardigan, unite the three west sides of Barmouth, and Port Madoc. From Carnarvon the line takes the west side of Snowdon, and by Harlech and Dolgelly trends round the eastern foot of Cader Idris to Machynlleth; thence it takes the western side of Plinlimmon to Aberystwith, and by Llanilar, Tregaron, and Llanfihangel to Carmarthen. This line passing near, and accommodating six, port towns, and traversing a district rich in mineral wealth, and a branch of the Great Western, which is intended to run from Oxford by Worcester and Bishop's Castle, to join this line at the foot of Cader Idris, it will be placed in connection with the metropolis and the south and west of England. Our space, however, will not allow us to enter fully into the merits of the undertaking in our present Number.

NEW LOCOMOTIVE ENGINE.—Among the numerous models deposited in the Royal Polytechnic Institution, we noticed a locomotive engine, for the purpose of propelling a train up inclines. It is an invention of a gentleman named Coleman, who has brought it lately from America; it appears perfectly complete (as far as we can judge by a model) to do all it is required, to prevent the necessity for cuttings, tunnelling, &c., on railways. The gradient, up which this little engine draws very considerable weight, is on the scale of 800 feet in the mile, or nearly one foot in seven rise; it is provided with an Archimedean screw between the axles of the carriage, which screw, on coming in contact with a series of friction rollers, placed exactly in the centre of the line between the rails, are made to pull the carriage and train up the incline without stoppage of any kind to attach apparatus, &c.—a desideratum of the utmost importance, where the country to be traversed is undulating. According to the opinion of Mr. Coleman, it is also applicable to atmospheric railways.

TREWOLLACK MINE, ST. COLUMB MINOR.—The adventurers and friends of this promising sett met at the mine on the 29th ult., and afterwards dined in a room on the barton of Trewollack. They were highly gratified with the encouraging prospects of the sett. The meeting was held to celebrate the erection of a steam-engine, which was begun and completed in the unusually short space of five weeks, reflecting great credit on the exertions of the manager.

MEETINGS OF PUBLIC COMPANIES DURING THE WEEK.

MONDAY—Shipowners' Towing Company, at Twelve for One—Huddersfield and Manchester Railway, at Twelve.
TUESDAY—London and Blackwall Railway Company, at Twelve—Leeds and Thirsk Railway, at Twelve.
WEDNESDAY—London and Enniskillen Railway, at One—Maryport and Carlisle Railway, at Twelve—Taff Vale Railway, at Twelve—Dublin and Belfast Junction Railway, at Twelve—Lynn and Dereham Railway, at One—Eastern Union Railway, at One—Newry and Enniskillen Railway, at Eleven.
THURSDAY—Chester and Holyhead Railway, at One—Great North of England, Clarence and Hartlepool Junction Railway, at Twelve—Midland Great Western Railway of Ireland, at One—Waterford and Limerick Railway, at Twelve.
FRIDAY—Norfolk Railway, at One.

LATEST CURRENT PRICES OF METALS.

LONDON, AUGUST 15, 1845.

IRON—Barrs.	Wales..ton	£	s	d.	TIN—Com. blocks...	£	s	d.
..London	0 0 7 10 0	0	0	4 10 0	..bars	0	0	4 11 6
Nail rods	0 0 9 0 0	0	0	4 15 0	Refined	0	0	4 15 0
Hoop (Staff.)	0 0 10 5 0	4	4	5 0 0	Straits	4	4	5 0 0
Sheet	0 0 11 10 0	4	7	4 8 0	Banca	4	7	4 8 0
Bars	0 0 10 10 0	1	11	1 13 0	TIN PLATES—Ch...	1	11	1 13 0
Scotch pig, Clyde	0 0 3 5 0	1	17	1 19 0	..IX	1	17	1 19 0
Russian, C&C...	0 0 0 0 0	0	0	1 12 0	..IX	0	0	1 12 0
PSI	0 0 0 0 0	0	20	5 0 0	LEAD—Sheet...	0	20	5 0 0
Gouriet	14 5 14 10 0	0	21	6 0 0	Pig, refined	0	21	6 0 0
Archangel	0 0 0 0 0	18	15	19 0 0	..common	18	15	19 0 0
Swedish, for arriv.	0 0 0 0 0	0	0	0 0 0	..Spanish, in bd.	0	0	0 0 0
..on the spot	11 0 11 10 0	0	0	0 0 0	..American	0	0	0 0 0
Steel, fag.	16 10 16 15 0	24	0	24 5 0	SPELTER—(Coke)...	24	0	24 5 0
..keg	15 10 16 0 0	0	0	0 6 0	ZINC—(Sheet) m export.	0	0	30 0 0
..Tilly	0 0 0 0 0	0	0	0 0 0	QUICKSILVER—lb.	0	0	0 4 6
Tough cake	0 0 0 0 0	0	0	7 2 6	REFINED METAL	0	0	7 2 6
Best selected	0 0 0 0 0	0	0	0 0 0	..ton	0	0	7 2 6
Ordinary sheets, lb.	0 0 0 0 0	0	0	0 0 0	..Ditto	0	0	0 0 0
..bottoms	0 0 0 0 0	0	0	0 0 0	..Net cash	0	0	0 0 0
Discount 24 per cent.	0 0 0 0 0	0	0	0 0 0	..Discount 24 per cent.	0	0	0 0 0
..Net cash	0 0 0 0 0	0	0	0 0 0	..Net cash	0	0	0 0 0
..Discount 3 per cent.	0 0 0 0 0	0	0	0 0 0	..Discount 3 per cent.	0	0	0 0 0
..Discount 14 per cent.	0 0 0 0 0	0	0	0 0 0	..Discount 14 per cent.	0	0	0 0 0

(From our Correspondent.)

IRON.—Welsh and Staffordshire rather more in demand; in Scotch pig there are buyers at 62s. 6d. to 63s., no sellers under 65s. The makers will not sell under 60s.

COFFEE.—No alteration to notice.

TIN (English).—The demand continues fair, without being brisk, but stocks are low. Straits and Banca are held at quotations, and there are orders in the market at 2s. under.

TIN PLATES.—Very little doing in charcoal, but a good business doing in coke.

LEAD.—Remains very steady.

SPELTER.—Price nominal, there being no demand for exportation; a few small parcels have been sold at 24l. and 24l. 5s.

(Communicated by Messrs. Whitcomb and Barton, Old Broad-street.)

We have nothing of material consequence to report in English bar-iron, beyond what appeared in last week's Mining Journal. In Scotch considerable transactions have taken place at 62s. 6d. and 63s.; and the market continues firm at the latter price. Rails are also in good demand at 9l. 10s.

ENGLISH LEAD. steady at quotations, but not much doing—which remark also applies to English and foreign tin.

SPELTER.—This article has been exceedingly dull of sale for some time past, and there appears very little probability of a speedy revival.

PRICES OF TIN PLATES ON THE 1ST JANUARY IN EACH YEAR, FROM 1835 TO 1845, BOTH INCLUSIVE.

Date.	Quality.	From	To	Date.	Quality.	From	To
1835..	IX.	20 0 0	21 14 0	1840..	IX.	1 9 0	1 10 0
	IXX.	0 0 0	2 1 0		IXX.	2 1 0	2 4 0
1836..	IX.	2 4 0	2 8 0	1841..	IX.	0 0 0	1 10 0
	IXX.	2 10 0	2 14 0		IXX.	0 0 0	1 16 0
1837..	IX.	2 16 0	3 0 0	1842..	IX.	1 10 0	1 12 0
	IXX.	1 18 0	2 4 0		IXX.	1 16 0	1 18 0
1838..	IX.	2 4 0	2 10 0	1843..	IX.	1 6 0	1 7 0
	IXX.	2 16 0	2 16 0		IXX.	1 12 0	1 15 0
1839..	IX.	1 11 0	1 14 0	1844..	IX.	1 3 6	1 7 0
	IXX.	1 17 0	2 0 0		IXX.	1 9 6	1 14 0
1840..	IX.	1 12 0	1 16 0	1845..	IX.	1 5 0	1 11 0
	IXX.	1 18 0	2 2 0		IXX.	1 11 0	1 17 0

NOTICES TO CORRESPONDENTS.

The late receipt of the communication from Aberystwith (Friday afternoon) occasioned us considerable inconvenience, and prevented the availing of so much of its contents as we could have wished.

ATMOSPHERIC RAILWAY SYSTEM.—We are again unavoidably compelled to postpone the paper on this subject; but we shall next week publish a DOUBLE SHEET, with illustrations, and numerous valuable articles and communications.

J. E. Ward.—Our correspondent will see in another column that we have readily acceded to his wishes; we have, in a tabular form, presented our readers with the prices of each description of plates—I.C., IX., and IXX.—in the first week in January, in each year, from 1835 to 1845, both inclusive.

We presume Mr. Lethbridge intended his letter as a private communication—we have, therefore, withheld it; but, should he wish it to appear in the Journal, it shall do so, on his addressing us to that effect.

We have had our attention directed to a letter published in the *Monmouthshire Mercur* of last week, signed "Vindictor"—the writer of which, by imputing motives, forgets that he is not elucidating the bank from the charges of alleged want of common precaution in the conduct of its affairs. Our columns are alike open to the refutation of any statements that have appeared, and whilst we advocate plain dealing, and respect and uphold the truth, we never intentionally lent ourselves to such base purposes as that of calumniating either individuals or public companies. More than one of our correspondents have challenged parties connected with the bank to the proof, but the challenge has not yet been responded to.

M. (Oldham).—The statement respecting Chamber-lane Colliery cannot be inserted unless with the writer's name attached.

"J." (Merthyr Tydfil).—We shall be very glad to receive the promised communication, —that on the late dreadful explosion at Aberdare was intended for our present Number, but is unavoidably postponed from a pressure of late matter.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, AUGUST 16, 1845.

Our remarks of this week are necessarily confined, from our time and attention being so directed, to the mines in the Cardiganshire district, of which some slight evidence will be found in our present Number. We most heartily avail ourselves of acknowledging the courtesy and kindness with which we have been received throughout the several parts of the principality we have already visited; and can only express our hope, that the appliance of our exertions may be productive of advantage to a district which we cannot but consider only wants to be more generally known to be fully appreciated, and at the same time rendered beneficial to the capitalist, and to the industrious classes.

The almost unparalleled prosperity which now exists in the manufacturing districts—the continued activity in the iron trade, as well as metals generally, and the general prospects of the commerce of the country, would, on former occasions, as is known from painful experience, have caused a feverish excitement in the iron trade, and raised the prices to an exorbitant and unhealthy degree. We are happy to observe, that such is not the case at present, notwithstanding that since our remarks in the MINING JOURNAL of the 2nd inst. (when we noticed that the legislature had given its sanction to the construction of 1800 miles of railway), up to the closing of the Parliamentary session nearly 3000 miles of railroads are now at liberty to commence working in England and Ireland, that new foreign schemes are yet being daily projected, and that consequently the prospects of the future demand for iron must increase rather than diminish, still the prices remain firm. In the early part of July the nominal price for bar-iron was 10l. per ton, although large sales were effected at 2l. under that figure, and at the termination of the quarterly meetings the price fixed was 8l. per ton. Scotch pig, quoted at 90s. and 80s. per ton, was announced at 65s., and these prices still continue, with some little fluctuation, in different localities; the latter kind may still be quoted at the same price, and bar at 7l. 10s. to 8l. As we so well know that dazzling expectations, not immediately fulfilled, cause undue excitement, and that such excitement is of as injurious a tendency as depression, it is pleasing to notice the firmness in the iron trade, and the consequence is, that while large orders are pouring in, the make keeps in progress with the demand—a highly-remunerative price is secured—the workmen are obtaining wages on which they can support themselves and families—strikes, so injurious to the welfare of the community, are prevented, and general prosperity is the result.

It would be highly satisfactory to obtain correct conclusions as to the present state of the iron trade, with respect to supply and demand; and although a difficult point to arrive at, the stocks being only known to the makers themselves, still we may approximate near to the truth. In Scotch pig the make in the first six months of the present year has not very far exceeded the average of 1844, which was 350,000 tons, while the first six months of 1845 is equal to 400,000 tons per annum, or 7693 tons per week. The increase in the export of pig-iron from Scotland was, comparing the previous six months of the two years under notice, 3180 tons in favour of the present year; looking at the quantity likely to be consumed in Scotland for malleable iron, and probably some increase in the exports, there certainly are no appearances of a speedy decline on present prices, but rather, that with a steady demand, the prices will remain firm. With respect to the 3000 miles of railway before-mentioned (taken in round numbers), and estimating the quantity at 750 tons per mile, gives a total of 2,250,000 tons of pig-iron required for casting into railway iron alone, but as this will be spread over a period of several years, the increased demand not likely to come unexpectedly upon the trade, and (as we have so often before alluded to) the painful experience which has been acquired from former ill-timed and injudicious increase in prices, we think there is every probability that for a considerable time to come, this staple branch of our commerce will be marked by unusual firmness, and a degree of steady prosperity unknown for years.

While on the subject of iron, it will be interesting to many readers to trace the progress of its make during the past century. In 1740, the quantity of pig-iron produced in England was only 17,000 tons, from fifty-nine furnaces; in 1750, it had increased to 22,000 tons; in 1788, the amount was 68,000 tons, and 121 furnaces; in 1806, the number of furnaces had increased to 169, producing 250,000 tons, and in 1820 the amount of pig-iron in England was 400,000 tons, while, last year, the total produce of pig-iron could not have been less than 800,000 tons, which has considerably increased in proportion in the first six months of the present year.

(FROM A CORRESPONDENT.)

Many of our readers have thought our remarks of last week, upon the fictitious sales of mining shares, by auction, at the Hall of Commerce, as somewhat too grave, when it is considered what ridiculous farces they are allowed by all to have become. It seems to be a pretty general opinion, that, from their very absurdity, they would have died a natural death, without the aid of our Cornish "crusher." As Horace says—

"*Possunt at juvenes visere feridi,
Multo non sine risu,
Dilapsum in cineres fucem.*"

We confess we are not over ambitious of the credit to be derived from breaking butterflies upon a wheel, but we cannot look quietly on and see the mining interest injured in ever so small a degree, without interposing our voice, in condemnation of the practice which causes the injury. The mining market is so limited, that, even if they were supported by the public, we see no commensurate good, which could result from these auctions, whilst, as at present carried on, they are creating a false market for shares, the ill-effects of which, whatever our facetious friends may think to the contrary, may be long felt. The auctioneers do not attempt to make them even look respectable. Surely there are plenty of unemployed individuals in this great city, who would be glad, for a trifling consideration, to attend and occasionally give a bid, which would have,

not only the good effect of making the thing look better, but would save them the mortification of addressing their eloquence to empty benches. Numbers of shares, we are informed, were again put up on Tuesday last—not one lot, however, was sold; although there was the novel feature of a party, calling himself a regular mining agent, attending the auction, and bidding for his own shares, which we consider not only decidedly incorrect, but sadly awry. The mining public have, by their refusal to attend, or to purchase at these sales, put a veto upon their utility; it becomes then a question, first, why are they continued, and by whom are some of the lots of shares in mines (whose very names are unknown to the regular dealers) supplied? We have received information upon both these points since our last, and when our inquiries are completed, shall be prepared to enlighten our readers; in the meantime, if they do happen to catch a few "innocents," let them revel awhile in their successes—"The sunshine they live in is but the prelude to their dissolution, when they are ripe they shall be plucked." We really should not be surprised to see shares offered, ere long, in a sett consisting of the centre walk of the Hall of Commerce; there will, at least, be no false description here, in saying there is a fine course of lead, not only visible at surface, but ready dressed.

We stated last week, and repeat it, that we think the periodical sales for railway shares an excellent contrivance, and having no ill-feeling whatever towards the Messrs. LAMOND, we heartily wish them success in this branch of their business. The closeness of the Stock Exchange renders it impossible for principals to transact their own business, as they can in mine shares; and when the enormous speculations now going on in the former, in every part of the country, is considered, the business of which is principally sent to London to be transacted: some slight check upon the Stock Exchange is rendered absolutely necessary. Let us take a common and daily occurrence to exemplify our remarks:—The Stock Exchange consists of two parties—the jobbers indoors, and the brokers out—the latter being employed by the public to buy, and which is generally done of the former, who, in shares of the value of 2l. or 3l. each, make $\frac{1}{2}$, $\frac{1}{4}$, or $\frac{1}{8}$ per cent. price; in a slack market it is generally the latter, and on these terms only will they do business; for instance, a broker has an order from the country, or elsewhere, to buy, say fifty shares, in a railway at the market price; he goes to the jobber in the "house," who makes the price $2\frac{1}{2}$ to 3 pm., the latter being the price which the broker is obliged to give for his principal, charging him his commission of 1-16th per share besides. Now, suppose a few days after the purchase, the principal is obliged, from some unforeseen cause, to sell out, and the market remains in *statu quo*, the jobber, of course, makes the same price, of $2\frac{1}{2}$ to 3 premium, but will only give $2\frac{1}{2}$, thereby entailing a loss upon the principal of 25l., besides commission, without the slightest change in the market price; the difference, between $2\frac{1}{2}$ and 3l., going into the pockets of the jobber. Even for the principal to get his money back, it will be perceived, the shares would have to rise more than 10s. per share, that is, to a price of $3\frac{1}{2}$ to $3\frac{3}{4}$. The amount of this kind of business daily done, especially in shares purchased merely for speculation, is almost incredible; in fact, were one-half the "rigs" of the market known, or reflected upon by the public, they would pause before they entered upon such fearful speculations, or would deal in an open market, where they could buy and sell for themselves, or employ others to do so, without being obliged to put 10s. per share into the pockets of the jobbers. There is nothing of this sort in mining property, and the arguments that apply in favour of railway sales do not touch upon mines, and let therefore, say we, these auctions for mining shares cease.

The treaty entered into between the British and Neapolitan Governments has excited the ire of our Gallic friends, who are ever jealous to see a commercial reciprocity existing with England and foreign states, but particularly those of Italy. The difficulties that have so long existed on the sulphur question are now finally adjusted, and will, no doubt, be the means of creating a great commercial intercourse between the United Kingdom and the Neapolitans. The monopoly exercised by the Government over the sulphur trade has long been a serious grievance to the merchants of Naples, as their former commerce with this country was completely destroyed, England being one of the greatest importers of this article. The King has wisely considered the petitions of the mercantile body, by the altering of the restrictions under which they laboured.

The proprietors of white salt works in this country are anxiously looking forward to the reports on the questions sent out to India by the Board of Directors of Leadenhall-street, on the restrictions under which the introduction of British salt into India, is so much complained of by the whole trade in our salt mining districts. It is to be hoped, after the expectations held out by the Boards of Trade and Control to the petitioners on the subject, that the East India Directors will not throw any obstacle to the importation of this necessary article into our Indian Empire under a fair duty, which will not only be the means of creating an honest competition with the abominable monopoly that has existed for years, but, at the same time, put a stop to the adulteration and smuggling system that prevails to a very great extent by the natives into the interior. The demand for British salt for Hong Kong and China is rapidly on the increase, being far superior to that which can be exported by the Americans, who are striving hard to establish this trade themselves in the Indian Archipelago, and if the East India Company persists in the restrictive system of monopoly now pursued, either by itself or its agents, against English commerce in this requisite commodity for the well-being of the vast population under their rule, they will find out, but, perhaps, too late, the error they have committed. The traders of the United States of America are the most formidable rivals against the preponderance of British commerce in the South Pacific, India, and China, and if the Hon. East India Company does not modify its tariff, and encourage more than it has hitherto done the welfare of our manufacturers at home, the result will be, that the French and Americans, equally jealous of our industry and resources, will inundate the eastern markets by contraband means.

THE INCREASE OF DEMAND FOR IRON.—This most useful, and, in fact, most necessary, metal, for the welfare of man, is daily expanding its power, not only in Europe, but in Asia, Africa, and America. Railways are being laid down from north to south, east to west; but this is not the only advantage that will be derived by great commercial nations as a rapid transit for passengers and merchandise, but the benefits it will bestow in tropical climates, so subject to earthquakes, where the lives of the inhabitants are constantly in jeopardy. Several very extensive contracts have lately been entered into in this country for the erection of iron houses, or villas, in the West India Islands, Cuba, and the Havana, Mexico, Colombia, Bolivia, Central America, Peru, and Chili, where the dreadful effects of those convulsions of nature are so frequently felt. It is evident that iron will, in a few years hence, become one of the greatest articles of commerce for the security of individual life and private property. In referring to the melancholy conflagrations that have lately taken place at Quebec, where nearly the whole city was reduced to ashes, being chiefly built of wood, how different would it have been had galvanised iron been the principal article in building? Iron abounds in the Americas, both North and South, and only wants working to bring it into general use. How many lives would have been saved in the numerous earthquakes that have taken place within the last fifty years in South America, had they had iron dwellings, instead of the wood and feeble fabrics they now possess? A change, however, we are glad to see is very soon likely to take place by the erection of galvanised iron dwellings and warehouses in our West India colonies, Chili, and nearly all parts of South America. Contracts having been entered into for the sending out of several well-constructed buildings of that metal.

THE IRON TRADE AND RAILWAYS IN FRANCE.

Being desirous that the readers of the *Mining Journal* should have the most correct information upon the cause and probable effects of the rise in the price of iron in France, which subject at present occupies the general attention of speculators in railway operations on the Continent, we translate from the *Journal des Travaux Publics* the Editor's remarks, as presenting his views on the consumption of iron, and the probable extension of the railway system throughout France:—"A rise in the price of iron began to show itself in June last at the fair of Besancon, and which continued at the fair of Chalon—white castings were there sold at 150 f. to 170 f.; gray, from 190 f. to 210 f.—therefore, the quotation of iron naturally followed that of castings. This rise was anticipated, as it was preceded by the advance that had taken place in England, Belgium, and Germany, and what is to be wondered at is, that it had not been before. The rise in the prices in England was declared with all that fervour which is created by speculation, and the prices doubled which have been pretty steadily maintained. This can be accounted for, that there are those calls upon her, not only for her home demands but for exportation to the different countries towards which she has large contracts to perform. Great Britain has at present more projected lines of railway to be laid down than what she has completed. This system of communication is spreading itself not only in Europe and America, but in Africa and Asia; there will be shortly large lines, or trunks, from one part of India to the other. When one examines all the railways that are to be constructed throughout the world, the great rise of English iron is not to be surprised at. It is not only in rails and other materials for railways that the English forges, or ironmasters, have received very considerable orders, but they have also to supply the demands that are made for iron of every description—sheet-iron, rods, pig, bars, hoops, &c., which is one of the most convincing proofs of the improvements that are making in England in iron, and the great demand there is all over the world for that branch of her industry. The same causes have produced the same effect in Belgium, which had received extensive orders for exportation in consequence of the Zollverein having granted them peculiar favours in the reduction of the custom dues, which has increased considerably the demand for Germany; but, it was impossible for her to fulfil these new demands at the price of 195 f. to 200 f. The crisis that had been so great a few years previous, induced the masters of forges to extinguish a portion of their furnaces, to discharge their workmen, and consume all their ore without renewing it. At present the position has changed; it is no longer the sale that occupies their attention, it is the means of enabling them to execute the extensive orders they have accepted for exportation. They have, therefore, been obliged to rekindle their furnaces, replenish their supplies of ores, and recall the workmen to the mines; but, as they have undertaken other works, it is only by giving them high salaries that can bring them back. We only make these remarks as it is a prelude of what must happen in France, and that very shortly. The rise, therefore, in Belgium is not less than that in England. A Brussels paper lately stated that the reason that had caused the price of rails to rise from 42 f. to 44 f. in 1836, was again showing itself more forcibly, and would be of longer duration, as railways at that period were only experimental; but now they are established nearly from one end of the country to the other, or in progress. If the prices of iron have not followed this movement in France, it can only be accounted for by the delays and apathy that have manifested themselves in all the grand undertakings, and all the improvements in this country which have caused for England and Belgium so great a call for their iron and their mineral productions in general. The indecision that has prevailed for so long a time in the Chambers, and on the part of speculators, on the best system to adopt with respect to railways has been most fatal to its development. We have not a main line, or trunk, that runs from Paris to the frontier; and even the rails of the Northern line, which is the most forward in progress of completion, have not yet been contracted for—whilst England and Belgium are in possession of their principal lines, and are actively cutting the secondary ones, or branches. All this unaccountable apathetic feeling on the part of railway enterprisers in France, can only be that they are fearful that the public wish the works to be executed too expeditiously, which would, consequently, increase the price of labour, and all the different materials requisite for an iron railway. It is not only these new means of communication that will cause a great consumption in iron. There are many other means of industry that promise to be prosperous, but which are very backward in France, and would require a considerable quantity of iron and other metallic productions. The building of iron steam-vessels has taken a rapid turn in England, not only for its superiority over wood, and being much lighter by one-fourth, but more salubrious. We are, therefore, on the point of building in this country a considerable number of iron steamers—the transatlantic packets—the vessels that we shall have to send to the coast of Africa for the suppression of the slave trade, according to the treaty concluded with Great Britain, and also all the vessels necessary for our commercial service, and our Royal navy—the inferiority of which compared with that of England, was most forcibly exposed by his Royal Highness the Prince de Joinville in his excellent pamphlet 'On the Navies of Britain and France.' The use of iron for building purposes is becoming general throughout France; scarcely can one pass our large towns without being astonished at the wonderful progress that the use of iron has made in all its forms, either cast or wrought. We see columns supporting three to six stories of stone, as tubes for the conveyance of water and gas, and every description of ornament. It is becoming daily more general in every description of buildings; and the disagreements that are continually taking place between the master carpenters and their men, will lead to its general adoption where it can be substituted for wood. It will be seen that the demand for ores is annually increasing, particularly iron. Extensive manufactories are being established in our northern departments, and all the mining districts, to meet the contracts that will naturally be called upon to be entered into. England and Belgium have every facility for the working of mines; their ores and coal beds are closely combined together, so that there is little difficulty of working the one with the other—whilst in France our extensive coal mines have not as yet been explored to advantage, or brought into work—so that many of our ironmasters are obliged to import from England and Belgium, which two countries are inexhaustible both in iron and coal. Iron, therefore, will and must naturally greatly increase in price from the demands that are now made, and the ironmasters in the different districts will not furnish the rails for the railways without they have an advance of 10 to 12 per cent. on the former prices. Therefore, let Government give every assistance they can to this rising branch of industry, and every facility to the mining speculators."

ADMISSION OF IRON INTO FRANCE FREE.—This subject is now undergoing the most serious consideration of the Minister of Commerce. The fact of Great Britain and other countries now so largely extending their navy by the erection of iron vessels, it has become a question of considerable interest with the French Government, whether they are not placing difficulties in the way of improving their own navy by the imposition of heavy duties on foreign iron, as France is even yet an importing country not producing sufficient for their own usual demands, much less any great increase for shipbuilding and other large works. The whole question of the progress of metallurgy in France, the prices of iron in England, Belgium, &c., will be thoroughly entered into, and it will shortly be decided whether iron shall be admitted into France duty free, or whether such duties shall still be levied.

NOTES ON THE MINING DISTRICTS OF SOUTH WALES.—No. I.

We promised, last week, to enter more fully into a description of the principal geological characteristics of Cardiganshire, and, furthermore, to give a general outline of the several mines at present worked, as also those which hold out inducement for the employment of capital.

The mineral district of Cardiganshire is principally constituted of granite, or clay slate, and from the great width of the formation, ranging, as it does, from the north, and being on the south overlaid by the Breconshire red sandstone, embraces a space of upwards of thirty miles from north to south. It may thus be reasonably inferred, that its depth is considerable; and we have been led to believe, in looking at the section of Sir Henry de la Beche, made with very minute care and attention with respect to the curve of the strata of the Silurian rocks in this immediate district, that the depth cannot be estimated at less than 2000 fathoms. Reasoning, also, from the evidence of mineral in the rocks constituting the rising ground from the sea-level attained at Goginan, to the top of Plynlymon mountain, lead ore being found in both places, we have a height of nearly 500 fathoms—inconsiderable, in comparison with that of some 2000 fathoms, or more, as assumed by Sir Henry de la Beche, but still sufficient to constitute an important and lasting mining district, being, as it is, some seven or eight times the depth of the deepest Cornish mines. The principal channel of productive lead ground in this important district holds a direction throughout nearly the centre, from south to north, or from 10 deg. to 15 deg. west of magnetic north. But this line of metalliferous ground is so far regular that it would appear singular, yet such is the case, that a thread drawn across the map of Cardiganshire passes over from south to north a great portion of the most productive mines in the county, the lodes running east and west, including Esgarmwyn, Glogfawr, Glogfach, Logylas, Maenarthur, Frongoch, Cnenant, Foxes-Path, Gelliriz, Goginan, Darren, Penycfen, and Talybont mines, which brings this range to the sea-coast. There are other mines highly productive some distance east and west from the described line, such as Cwmystwith and Nant-y-Cria to the east, and Grogwinion, Graigoch, Cwmmeddion, and Llwynmalls to the westward; but it is not improbable that there are other lateral belts of productive ground running on either side, while it is possible that they will be found to be within the range of rock which has already proved so productive. Having thus far briefly observed on that which appears to us deserving of notice in the mineral formation or deposit of the country, we now proceed from Cwmystwith to take the course of the river Ystwith, and thus we arrive at Logylas.

Having left Cwmystwith mine, of which we have since acquired more detailed information, and which we purpose rendering in our next Number, we proceed to give our brief notes from a cursory surface "view" of the several mines. In following the river Ystwith about five miles to the great level driven by Mr. Sheldon, some fifty years since, we found, amid much bustle, as is natural and pleasing to a "stranger," a pretty considerable number of girls, boys, and men, with extensive dressing-floors and good dressing machinery, consisting of a 45-feet stamping-wheel, a 20-feet crushing-wheel, 12-feet gigging-wheel, and a large wheel in course of erection on the same stream, lower down, intended for stamping, crushing, &c.; the whole machinery, supplied with water brought from Llynferdin Lakes, a distance of fourteen miles through a rough country, diverting this stream from the source of the Elan to the Ystwith. The level before-named was commenced driving as a cross-cut to the great Logylas lode, which had been only partially worked at two points—viz., the Logylas East, and Logylas West mines—each being worked from thirty to fifty fathoms in length, and twenty or thirty fathoms deep, which yielded rich bunches of ore. Unluckily as miners occasionally are—for it is not to be expected that good success is at all times to attend them—the level was carried on to a branch of the lode, which was only driven upon two or three fathoms, and, being found unproductive, the trial on this lode with the cross-cut or great level was suspended for many years, the proprietors abandoning the thing as worthless, after an expenditure of 8000l. or 10,000l.

After a lapse of time the eastern Logylas was again resumed by a new company, who sunk from the surface on the lode, from which it was found that the great level had stopped only seven fathoms short of the lode. After laying idle nearly twenty years, the mine was again set to work, the lode cut, and a fine bunch of ore found and worked on, from ten to twenty fathoms long above the level, which appeared shortening and declining in depth, but was put down, as we gather, ten fathoms below adit, drained by a water-wheel, and abandoned as approaching nearly to the end, or bottom, of the shoot of ore, at which time (about twelve years since) it appears the mine changed hands, as may be supposed from the former workers calculating on all their chances to be gone.

The adit at the point where it intersected the lode is sixty fathoms deep. The present company, selecting the most promising "measures" to drive on, commenced the forty-four fathom level sixteen fathoms above the adit level, in which, after eighteen months' driving, a fine course of ore was discovered, and opened upon fifty fathoms long, yielding ore to within ten fathoms of the surface. This has been, as we are given to understand, sunk upon forty fathoms below the adit level; the adit and deeper levels have laid open ore ground, under the western part of the mine, and under the supposed exhausted bunch, worked by the former company, a course of ore full 200 fathoms in length, of the finest possible description, being laid open; in addition to which, ore ground, equal to a return of 150 tons per month for more than twenty years, to come, leaving large profits, as it has been doing for the last ten years, may be expected; this mine is more than 100 fathoms deep from surface, and the bottom levels hold out as great promise as any above have heretofore done.

Our attention has also been directed to the proposed lines of railway, connected with the principality, and, if we mistake not, we shall be able to render such information from private sources, as to the levels and direction of the line, as will, doubtless, be appreciated by the public—at the same time, that it may lead them to a correct conclusion of the value to be attached to the several projects.

At the Liverpool Assizes, on Thursday last, an action (Prickett v. McKenzie) was tried, arising out of the non-fulfilment of a contract for pig-iron; the plaintiff at the time was in partnership with his brother at Manchester; as iron merchants; the defendant was of the firm of Bankier and McKenzie, iron merchants, of Glasgow. In September last the defendant agreed to supply 500 tons of pig-iron at 2l. 15s. per ton, the contract being made by one Andrew, of Manchester, who acted as defendants' agent at Manchester. One hundred tons were delivered on the 7th December, but the remainder had never been supplied, though repeatedly applied for; a written agreement for the sale and purchase was put in. The principal ground of defence was, that Andrew had no authority, which could bind the defendant for the 400 tons, which, however, completely failed, and, under the direction of the learned judge, the jury gave a verdict for the plaintiff, for the difference in the price of iron at the time of the contract and the 9th October, which was 9s. per ton.—Damages, 180l.

MINERAL EXPORT TRADE.—We extract the following from the declared value of the Exports of the principal Articles of British and Irish Produce and Manufactures, in the five months ended June 5, 1845, compared with the Exports in the corresponding periods of 1843 and 1844:—

	1843.	1844.	1845.
Coals and culm.....	£262,331	£244,147	£337,325
Iron and steel	1,019,157	1,239,656	1,335,082
Copper and brass	704,840	748,130	746,040
Lead	123,195	123,975	102,429
Tin, in bars, &c.	44,834	33,673	16,424
Tin plates	165,728	218,580	257,412
Salt	81,613	76,096	67,649

The consumption of coal in France amounts yearly to 52,000,000 of metrical quintals; the quantity extracted from the French mines is under 37,000,000; so that she is obliged to draw 16,000,000 of quintals from England, Belgium, and Prussia. France thus pays for that article a tribute of 15,000,000 francs to foreign countries.

THE MINES OF SAINT DIZIER.—All the foundries have greatly relinquished their fabrication, notwithstanding that there is an abundance of water; some are quite extinguished, others have only one furnace alight. At Marnaval there are only two fires, this arises from the want of ore, and the little demand from the provincial warehouses, which will not allow the forges to be in full work, except at a great loss. Although the produce is small, the price of wrought-iron scarcely maintains itself, at 320 f. for Paris, and 325 f. to 330 f. for the provinces, the 100 kil. (2 cwt.) There is a general stagnation in the trade; at the fair of Beaucourt the iron had, however, a generally better demand.

DEVELOPMENT OF THE MINERAL WEALTH OF IRELAND.

When in the last Number and a previous one of the *Mining Journal* we made some observations on the advantage of railroads in Ireland, in respect to the more ample development of the mineral wealth of that country, by affording facilities of transit of mineral material from the mines working, and to be worked, to ports of embarkation all round its coasts, it was far from our intention to imply that the attainment of this advantage alone would justify enlarged speculation in the construction of such railroads, or to insinuate that their utility would be confined to the affording of such facilities. In treating on the development of the abounding resources of Ireland in the mineral department—resources, heretofore, of but comparatively trifling avail to the national interest, by reason of the difficulty of access to them for want of facilities of conveyance; we considered railroads exclusively in reference to this much desiderated development as one of the sources from which that kingdom must necessarily derive a large portion of that prosperity which it ought to possess, and which we anticipate will follow the construction of railways throughout its extent, and rendering its products in all kinds as they would be more accessible to the merchant or trader, and more profitable to the producer. The lines of railroad already projected—for those formed, or in progress of formation, are of but partial extent—are, as far as we can judge, by a reference to the map of the country, well planned, and when carried into effect, as doubtless they will be, the stimulus given to trade and commerce, as well as to the embarkation of capital in mining concerns, will be much greater in proportion than that experienced in England upon the introduction of similar modes of transit of goods and passengers. We are induced to make these observations in consequence of a remark in an Irish paper, to the effect that our advocacy of railroads for Ireland appear to result alone from our desire to have her mineral resources explored, and that we shut out of view all the other national advantages which are expected to result from them; thereby causing an impression that their utility would be of a confined character, and that the prospect of their being profitable speculations would be at best but doubtful.—But to return to our notice of the mines and quarries of the southern district. Near the manganese mines at Glandore, in the county of Cork, a copper mine was recently opened at the foot of a high cliff forming the termination of a chain of mountains surrounding and overhanging the basin, which forms the upper harbour of Glandore, and on which is situate the little town called Leap. The indications of rich and abundant ore, which presented themselves at the first opening of this mine, were exceedingly promising, the ore taken up being from 30 to 35 per cent.; but, after working it for a short time, the lode, as the miners proceeded, narrowed, and at length suddenly terminated. Another shaft was sunk at a few yards distance from the first, but, after penetrating some distance, although favourable indications were observed, the miners did not fall in with the original lode, which was supposed to be only interrupted by the interposition of a vein of hard stone where the miners left off in the first shaft, and which would be again discovered by cutting in an angular direction to it. The parties who speculated in this exploration, and who are resident gentlemen, having an interest in the land upon which it was made, either discouraged by the expense already incurred in it, or, perhaps, not in a pecuniary position to continue it effectively, abandoned it; but with a professed determination to again resume the working under more favourable circumstances, which we presume to be the obtaining of the capital necessary to follow out such a speculation.

Here, again, the want of capital in Ireland to take advantage of her mineral resources is exemplified. There can be no doubt, judging from the indications, that there is in the immediate locality of this exploration rich copper ore; and its abundance can only be tested by perseverance in exploring for it, perhaps not much further than has already been done. The proprietors of this mine, if it turned out well, would have the almost peculiar advantage of shipment of the mineral from the very mouth of the shafts—the stony and earthy matter produced from the working of the mine, forming a quay at the foot of the cliff, and projecting into deep water, scarcely ruffled, even in stormy weather, so sheltered is the basin or inner harbour, described above by us, by the mountains which surround it on all sides, except its narrow, but sufficiently deep, inlet. It is a fact worthy of notice, as an indication of the mineral properties of this particular locality, that, about forty years since, a gentleman of the name of Roche, the then tenant of the lands of Glandore, under Lord de Vescy, the then and still proprietor in fee, procured for several years a large quantity of copper ore, by burning to ashes, within those years, an extensive turf bog, which lay in a valley between the hills, at the extremity of which was made the exploration for copper ore, above mentioned, and the elevated ground upon which is worked the manganese mine, described in previous Numbers of the *Mining Journal*. These ashes were shipped for Liverpool, where it sold in the mineral market, as well as we recollect from our communicant's information on the subject, for 8l. and 10l. a ton, according to the quantity of ore it contained. In this immediate neighbourhood, and on a link of the same chain of mountains, are worked the celebrated Benduff slate quarries, yielding a slate in quality equal, if not superior, to the Bangor slate. We have far outrun the limit we had assigned to ourselves in this article, and must, therefore, defer further notice of the mineral resources of the district in question—through which, by the way, a railroad is to be shortly constructed, until another occasion.

We have seen a copy of "A Letter to the Right Hon. the President of the Board of Trade, on the Illegal Nature and Pernicious Tendency of a System in Operation in the Mines of Great Britain and Ireland, known by the name of Jobbing,"—by Thomas Irving Hill. Mr. Hill is a Cornishman, and expresses himself anxious to redeem the character of his native county, which has, he asserts—and we are free to confess it—suffered much from the system which he deprecates; we give him full credit for his motives, but doubt much the possibility of effecting a radical change. He very ably exposes the operation of "riggery," as it is termed, of Cornish mines or shares, through the agency of unprincipled persons resident in Cornwall, aided and assisted by a London party—we think the quotation he applies to the latter severe, but we are afraid too well founded—we extract, *Artem habent sine arte, partem sine parti quorum medium est menter viti corum mendicatum ire.*—He then enters into a very minute detail of facts, stating at length instances of gross frauds and impositions on persons of standing and importance in the commercial world and in private life. He, however, bears testimony to the firmness of mining in general, when legitimately conducted, and makes a pleasing contrast of the principle on which mines are carried on under the superintendence of Mr. John Taylor, with that which presents itself elsewhere. We are sorry we cannot enter more fully on the subject of this letter, which, however, we hope Mr. Hill will cause to be published; we conclude with the following extract:—"Unproductive, instead of productive, labour, is fostered by the system—of the labouring class, who should be stimulated by all legal means in their exertions to obtain the comforts and enjoyments of life—of this class there are instances or common miners advancing themselves to great wealth, at the expense of their own characters and of the county of Cornwall, with which they become identified, whilst it diverts the attention of capitalists, which would be otherwise directed from a less to a more profitable employment, and prevents the development of much national wealth."

At the Flintshire Assizes, an action was brought by Mr. John Davis against Mrs. Crockford, the widow and administratrix of the late Mr. Crockford, to recover 5000l. for coals taken by Mr. Crockford from under property purchased by the plaintiff in the year 1839. The property in question was originally leased by Sir John Hamner to a person named Scott, and afterwards acquired by Mr. Crockford from the assignees of the latter, under an assignment and conveyance of the interest so leased. The colliery leased by Sir John Hamner was known by the name of the South Mostyn Colliery, and run up to property belonging to Mr. Crockford, called the Abbey Colliery, and it was for having underworked this latter colliery into the boundaries of the former, that compensation was now sought for. The Abbey Colliery had been worked a little before Mr. Crockford came into possession in 1839, but on his taking it, the works were conducted with greater activity and vigour, and a pit was sunk very near the boundary line, which separates the two collieries. In December, 1841, Mr. Bagnall, a mining engineer, made drillings above and below at the Abbey Colliery, and found that Mr. Crockford had overworked his mine to the extent of 273 yards. An action of trespass was brought in 1844, but was left a *remahet* at the assizes, and in about a month afterwards Mr. Crockford died, proceedings were, therefore, taken in the present form.—After the examination of several witnesses, an objection was taken by the defendant's counsel that the plaintiff had no title; in this the judge concurred, and the plaintiff was nonsuited.

Original Correspondence.

IMPROVED MANUFACTURE OF CAST-STEEL.

Sir,—In the *Mining Journal* of the 1st of March last, there appeared a notice, headed "Improved Manufacture of Cast-Steel," in which it is stated, that a process had been discovered, by which cast-steel could be produced at a cost not exceeding that of pig-iron, of a quality suitable for the manufacture of steel. The process here alluded to has now been secured by a patent; but as the specification of it is not yet enrolled, a description of it must be deferred for the present. It may be sufficient, at this stage of the matter, to state, that if the cost of pig-iron, of a quality suitable for being converted into good steel, be 6*l.* a ton, the cost of cast-steel, made by the new process, with such pig-iron as the basis of the manufacture, will not exceed 6*l.* a ton in the ingot; the explanation of this apparent paradox must be reserved for the future; the premises are taken for granted at present. The cost of such steel, in forms suited for consumption, will vary with the purposes for which it is intended; the cost of tilting steel, including waste, may be taken at 6*l.* a ton, on an average; the cost of rolling steel is much less, and, for large sizes, will hardly exceed the cost of rolling bar-iron; including waste it would not exceed 1*l.* a ton, for very large sizes.

By the process now universally in use for making cast-steel, there is a difficulty in making a single mass of any considerable weight; the ingots in general use are formed from the contents of one crucible, the average weight of which does not exceed 30 lbs.; when a mass of cast-steel of greater weight than this is required, the contents of several crucibles must be poured into one mould—an operation involving much trouble, and great skill, and not always successful. By the new process masses of cast-steel of any size, or form, may be made with facility and certainty. Among the numerous novel applications, to which the enormous reduction of the cost of cast-steel effected by this process must have, one of the most important will probably be that of rails; there will hereafter be no difficulty in making rails entirely of cast-steel, of any size that may be required, and of any form that can be produced by the operation of rolling; and the cost of such rails would not exceed that of rails made of good malleable iron. My object in now addressing you, is to obtain, through the medium of your *Journal*, the opinions of qualified judges, upon the proposal to substitute rails of cast-steel for those at present in use, made of malleable iron. The advantages which a rail made of steel would appear to me to possess over one made of malleable iron, are:—

1. Much greater strength to resist impact.
2. Much less liability to wear by abrasion.
3. A great reduction of friction between the wheel and the rail.

The exact relative capacity of rolled bars of steel and rolled bars of iron to resist impact, can only be determined by experiment; the determination may already have been made, but, if so, I have not been able to meet with it in books; my own observations lead me to infer, that the capacity to resist impact of a bar of rolled steel, allowed to cool in the air, will very much exceed that of a bar of malleable iron; such a bar would be little, if at all, more elastic than a bar of iron. The strength of the steel bar would be much increased, by first hardening it, by plunging it into water, as it came red-hot from the rolls, and then letting it down to nearly a blue temper, by immersing it into a bath of oil, or of fusible metal, the boiling point of which would be found most suitable for the purpose. In this state the rail would possess considerable elasticity, and this quality would be objectionable were it to be laid upon isolated supports, or chairs, but this objection would probably not apply to such a rail, laid upon continuous bearings, similar to those in use on the Great Western Railway.

The capability of a steel rail to withstand abrasion, especially from the transit over it of a steel tyred wheel, would, probably, very far exceed that of an iron rail; it has been stated, that a steel tyred wheel running on a wrought-iron rail produces enormous abrasion of the latter; a steel tyred wheel on a steel rail would probably reduce the wear and tear of both, to a fraction of the amount at present existing.

Opinions vary much as to the effects of friction upon railways; where the tractive power is locomotive it is maintained, that without a certain amount of friction, the wheels will slip round, instead of progressing—granted; but instead of producing this friction by asperities on the rail, ought it not to arise from vertical pressure, bringing the wheel and the rail into the closest possible contact? In order to produce this effect, the weight of the engine must be greatly increased, and the limit to this increase, at present, is the capability of the iron rail to resist the crushing effect of the weight of the engine. Upon a steel rail of the same size as the malleable iron rail now in use, it is probable, that a locomotive engine of far greater weight and power than any yet constructed, might be advantageously used, to produce the cohesion necessary to impart progressive motion on a steel rail; and that when the *vis inertiae* of the motive power was once overcome, the diminution of friction between steel tyred wheels and a steel rail, would enable such an engine to produce a much more useful effect, from the same expenditure of power, than has yet been accomplished on iron rails.

It is upon an atmospheric railroad, however, that the advantage of a steel rail would appear to be most obvious; how every contrivance for reducing the friction between the wheels and the rails must add to the efficiency of the apparatus: the tractive power, in this instance, being independent of the rails, the greater smoothness that can be imparted to the surfaces of the latter, and that of the tyres of the wheels, the greater will be the effect produced by the tractive power, with the same expenditure of force. These remarks are offered by one who makes no pretension to a scientific acquaintance with the subject, in the hope of eliciting the opinions of those who possess such knowledge, upon a matter, which, at the present moment, is one of engrossing interest.—*CHALYBS: London, August 12.*

CAUSES OF EXPLOSIONS IN STEAM-BOILERS.

Sir,—In the *Mining Journal* of last week your readers are informed that "Dr. Ryan, in a lecture delivered at the Royal Polytechnic Institution, after some interesting details connected with the principal causes of explosion in steam-boilers, and in connection with the overheated state of flues and resulting accidents—the Doctor is thus reported to have given it, as his opinion "that the maximum point of evaporation was much below the red heat of iron—being, in fact, no higher than 400 deg. Fahrenheit—therefore, until the metal cooled, no explosion could take place." As explosions of steam-boilers are, for the most part, serious accidents, to distinctly trace their cause, and, if possible, point out a remedy, cannot ill become any one who has turned their attention to the subject; to do this most effectually, it is desirable that we do not too hastily apply experiments, conducted under certain circumstances, to explain effects produced under circumstances considerably changed. I submit to your scientific readers whether it be not highly probable that the experiments, brought to sanction the conclusion that the metal of the boiler must first cool down to 400 deg. ere explosion can take place, are not of themselves insufficient for such purpose, supposing boilers working under a pressure of 45 lbs. to the inch: for, if I understand those experiments aright, they were made under no pressure but the atmosphere; this being the case we require to know what modifications the pressure equal to three additional atmospheres, and 83 deg. increased temperature due to the aforementioned pressure, would have in diminishing the repulsive action observable between the hot iron and the water. The above institution and able lecturers merit the highest praise for the agreeable and ennobling entertainments they afford their visitors, together with their presenting to the inquiring mind a valuable compendium of the views and experiments of scientific men, yet it is possible that the aptitude for generalising and explaining effects somewhat beyond the range of particular experiments, may have a tendency to mislead, by inducing us to rely upon the lesser evidence—while we may obtain that which would be more to the purpose. With this thought in my mind, I was induced to make the following experiments, to form a practical estimate of what quantity of water any given surface of hot iron would convert into steam in a given time, at heats commencing with a rather dark red by daylight, and descending to about 500 deg.; and in the second experiment, commencing with 500 deg., and descending to the temperature at which the water ceased to boil; in the first experiment I found 3 oz. of water converted into steam in thirty seconds by twelve square inches of surface; and in the second experiment, the same quantity of water was converted into steam in eighty seconds, by the same surface. On applying these experiments to illustrate further some remarks of mine given in the *Mining Journal* of July 5, in which I have assumed forty-five square feet of surface so heated, we find that thirty-six seconds would convert 120 lbs. of water into steam at the higher temperatures, and ninety-five seconds at temperatures commencing at 500 deg., down to the temperature at which the water ceases to boil. The results arising from the aforementioned experiments show that steam, under such circumstances, may be generated with such rapidity, that if we even double the time indicated by these ex-

periments, it is then a cause quite equal to produce such effects as boiler explosions. I am not here questioning the experiments referred to, only in their being made the basis of the conclusion that steam cannot be generated with sufficient rapidity, until the metal attains 400 deg. In my own experiments, I found at the dark red heat it required twenty seconds to convert 1 oz. of water into steam, and on its just passing to an invisible heat, 1 oz. of water was converted into steam in fifteen seconds; but on its passing from 500 deg. to the temperature at which it ceased to boil, it took thirty seconds to convert 1 oz. of water into steam. It seems to me highly probable that at red heat the water is prevented from coming into immediate contact with the iron, by an atmosphere of steam, which we may suppose to be formed by the radiant heat—as at these high temperatures the effect is very obvious, when a small quantity of water is put into the hot vessel, it then rolls about like quicksilver, but this effect diminishes as the quantity of water is increased, thus indicating, that under great pressures, as in the steam-boiler, this peculiarity would be much diminished.

Birmingham, August 13.
Errors.—In my communication on Mr. Nasmyth's invention, p. 390, col. 1, nineteenth line from bottom, should have been "by the use of pump," &c., not "by the rising of pump," &c.; and in the article, "Impediments to the Progress of Useful Inventions," same page, col. 2, thirteenth line from bottom of first paragraph, should have been, "as the pointer is moved," not "printer," &c.

THE CRANK PIN.

Sir,—On our voyage from Antwerp to Hull we had the misfortune to break one of the crank pins. This occurred at three o'clock A.M.; and after struggling with one paddle till nine o'clock, we cast anchor on the coast of Norfolk, where the detaching of the adhering fragment of the old pin, and the adaptation of the new one, occupied a period of not less than thirteen hours—a very serious loss of time, and, in my opinion, a very needless and unnecessary one. One end is a complete and immovable fixture—the other fits loosely; now, surely, the former might be equally loose, and as easily detached; and a pin, with its nut and screw, might be used to render it immovable, and thus prevent the long and tedious process of expansion, by the continued application of braziers of live coal, which must be repeated for the insertion of the new pin, as well as the extraction of the old. Other plans might be easily suggested; and, at any rate, nothing can be more discredit to mechanical ingenuity than the present mode of construction.

Portland-place, Hull, Aug. 7.

THE RECENT FIRE DAMP EXPLOSION.

Sir,—The most hopeless of all hopeless subjects is that of any amelioration in the safety of working coal mines. Though entire changes in the system of working coal, and improved and increased ventilation, be imperiously called for, the question seems to be allowed by the Government of the country and the British senate, to "slumber and sleep," as if the lives of multitudes of human beings, incessantly on the verge of destruction, were unworthy of a thought. The noblest boon of existence is *life*, because its ultimate destinies are immutable and immortal, and this question is neglected, or "set at naught"—aye! and its suspension held to be unworthy of the "tribute of a sigh"—while the plaything of aristocratic pride, or the gawgaws of tinsel arrogance, are held to be "the one thing needful," and all this, too, in a country which calls itself *Christian*, or which may be, some of these days, "most *Christian*"—the adopted expression of Roman Catholic countries! What, on such a survey, Sir, must be the feelings of the reflective and contemplative mind!—not to speak of the man of feeling and intelligence? Nay, more, you shall find it stated gravely, by a correspondent in your own pages, that these wholesale hecatombs of victims offered to this infernal Moloch do not exceed the average casualties in the lists of accidents! What unblushing effrontery! "Oh Shame, where is thy blush!" The question is heart-rending, and any amendment deplorably hopeless. I confess I dislike extremely your paragraph last week, on the recent fatal explosion, which occurred a few days before, in Crombach, Wales; wherein no less than TWENTY-NINE human beings were instantaneously destroyed by an explosion of "fire damp." In this case it is admitted that ventilation had been, and was, miserably bad! There is no attempt to disguise the fact. Is this not, then, a case of wilful, culpable, and criminal negligence? It ought never to be forgotten that at this moment, tens of hundreds, of thousands of our fellow-creatures are connected with these subterranean volcanoes, and which may explode at any time. They are "in jeopardy every hour," and none will engage in the rescue! Poor human nature!—"most *Christian*!" indeed. I have said I very much dislike your paragraph, and my honest reason is, that instead of laying the axe at once to the Upas tree, to arrest its wide spread desolation, you seem to think, with the author of an almost similar article in the *Sun* newspaper, that the proper use of the "Davy" lamp, would, in a great measure, act as a preventive to these incessantly occurring accidents. I boldly answer *never*—and though, as I have stated on a former occasion, I believe that the "Davy lamp," with the shield of mica I recommended, is as good as any other, I repeat *all* safety lamps are decoys to danger, and *ignis fatui*, which lure to destruction, because they distract attention, and divert it from applying the only infallible remedy to the root of the evil. Besides, you know the "Davy lamp" is utterly condemned as altogether unsafe in its commonly employed form, both by science and practice, and can you forget that the atmosphere which requires a safety lamp, is destructive to the health of the miner?

Portland-place, Hull, August 11.

ON THE SUPPLY OF WATER—FILTRATION.

Sir,—In reading the remarks in the *Journal* of the 2d inst., upon the "Supply of Pure Water" by filtering, and experiments made by an engineer, proving the decrease, I beg to suggest that the objections may be partly remedied by constructing a number of filters, so as to allow the water to pass through the medium into a reservoir, and the medium, sand, &c., may be, as required, thoroughly cleansed from impurities, or renewed as required, without interfering with the cleansed water. The mode might be something similar to this—a large excavated basin to be surrounded by masonry, at the necessary distance another wall of masonry, between which let the media be placed, and the impure water be conducted, draining below the reservoir. The impure water even might be occasionally made the means of cleansing the very media by a little contrivance.—*London, August 12.*

AN OCCASIONAL READER.

The anniversary dinner of the Iron, Hardware, and Metal Trades' Pension Society, took place on Tuesday last, at the London Tavern, R. W. Kennard, Esq., the large ironmaster and railway proprietor, of Thames-street, in the chair, whose munificent patronage of this excellent institution, and whose energetic and pleasing deportment in fulfilling, for the second successive time, the duties devolving upon him in that capacity (in the absence abroad of the president, Mr. Alderman Thompson, M.P.), was the theme of universal admiration and gratitude with the numerous and highly-respectable assemblage of gentlemen, engaged in or connected with the several metal trades, by whom he was supported—setting a forcible example, by subscribing, for himself and family, a second hundred guineas, in addition to his annual subscription and former donation, to the many leading and opulent firms who have not yet enrolled themselves, in support of the praiseworthy objects of a society, rising to great public utility and importance, as was justly observed, with railway speed, and which was fully exhibited by the rapid influx of donations to the hands of the honorary secretary, Mr. H. L. Taylor, who was constantly employed in announcing the lists throughout the evening—the amount declared being between 200*l.* and 300*l.* A gentleman connected with the iron trade from Lisbon, who had arrived only a few days in London, after an absence of twenty years from England, attracted by the advertisement he had read of the meeting, voluntarily attended and gave a handsome donation. The dinner, supplied by the renowned proprietors of the London Tavern, was of the most liberal and handsome description; the conviviality of the evening was maintained in a very spirited manner by some excellent speeches, and the presence of Messrs. G. F. Taylor, Kenny, Moody, and Smith, professional gentlemen, added greatly to the pleasure of the evening, not forgetting the "good fires" of Mr. Toole, jun., the toast-master. The original founders and the committee of stewards must have felt highly gratified at the success of their exertions in behalf of their infantine society, which has been established for the purpose of granting pensions of twenty guineas per annum to decayed members, and fourteen guineas per annum to their widows. The contributions by members filling situations having been reduced at the last general meeting from 21*s.* per annum to 10*s.* 6*d.*—thereby evincing, on the part of the committee who recommended it, a strong desire to enrol amongst its members that class of individuals who would be most likely to require its benefits.

NEW IRON PLATE PUNCH.—We have received a communication from our correspondent, Mr. A. T. J. Martin, of Penzance, recommending a punch for cutting holes in iron plates, on the eccentric principle adopted by Mr. Thornycroft, in his iron plate shears, described in the *Journal* of the 5th ult. The plan he suggests is, to fix the punch at the end of a powerful lever, exactly over the bed of the anvil, on which the iron to be punched traverses in such manner as to move with a velocity exactly proportionate to the distances the holes are required apart; the other end of this lever is to be connected with an eccentric motion and fly-wheel, worked by the steam-engine or other power, and thus keeping up a continuous, powerful, and regular punching motion; the other details, such as the guides for the sheet-iron, hole in the anvil for the scraps, &c., can be easily understood by our mechanical readers.

PARSEY'S COMPRESSED AIR-LOCOMOTIVE.

Among the numerous systems which have been proposed for using compressed air as a motive power, the great difficulty has been to prevent that continual decrease of its power which must ever take place when it is admitted at once from the magazine attached to the locomotive to the pistons, acting on the cranks and axle of the driving-wheels. The principle of compressed air as a prime mover, has, we may safely say, for ages been promulgated, and in modern times extensive mathematical calculations have been made, and algebraic formulae laid down, to denote its power, and the loss of force sustained from this very cause—the decrease in its elastic force, in proportion as its density decreases; and although several attempts have been made to overcome this hitherto insurmountable bar to its practical use as a motive power, we believe none have yet been successful. Mr. Parsey, of Spur-street, Leicester-square, is another candidate for the honour of successfully and economically applying this mighty power, which nature has placed around us and at our disposal, to the purposes of locomotion, and, indeed, should the plan succeed, it may be applied to almost every conceivable purpose where power is required. We have been favoured during the week with an inspection of the working models by which the patentee illustrates his invention, and what has ever appeared a bar to the use of compressed air, not to us only, but what some of our first engineers have endeavoured to surmount without effect, after years of study and toil, certainly appears here to be overcome in a most simple and beautiful manner. The locomotive carriage consists of a pair of cylinders, the pistons, acting on the cranks of the driving-wheels in the usual manner, and these are the reservoir of compressed air, in front of which is a vessel called a receiver, to which is attached a self-acting regulator; the self-acting regulator consists of a small cylinder and piston let into the top of the receiver, and immediately in contact with a nicely regulated valve in the pipe which conducts the high-pressure air to the receiver; attached to the rod of this small piston is a spiral spring coiled around it, and actuated upon by a screw outside, in such manner, that the person in charge of the engine can, though the amount of pressure in the reservoir be ever so great, regulate the force to any point he requires—for instance, supposing the reservoir is charged at starting to 100 atmospheres, and it is required to work the engine at only four, which would be generally sufficient, the index is set to the proper point, and the air turned on, and should any obstruction occur in the working, by which there would be a tendency to increase the pressure in the receiver, that extra pressure immediately raises the piston and closes the valve; on the contrary, should there be an escape from any of the working parts which would tend to lower the density, the spring forces down the piston and the high-pressure air rushes in and preserves the equilibrium, until both the contents of the reservoir and receiver are of equal pressure.

Some analogy may be drawn between this arrangement, and that of a self-acting apparatus for filling boilers from a cistern, or the regulators in use at the large gas-works. Mr. Parsey's plan is, to have stationary engines where the condensed air can be generated at leisure; the engines will be thus filled when required, and which, he states, can be completely effected in *one minute*. There is certainly a degree of simplicity yet scientific truth in the arrangement. Mr. Parsey has, doubtless, come nearer the practical accomplishment of this important theorem than any plan we have before noticed; and should it be found, in carrying out the plan on a full working scale, that the cost of power required to compress the air is so small as to cause the economical working of the trains, a complete revolution must be effected in our railway system, as the wear and tear, and numerous other expenses, would be reduced to a mere fraction of what they are at present, many of the present causes of accidents removed, while any speed might be secured which could possibly be required.

BODMER'S PATENT LIFTING-ENGINE AND WINDING GEAR.

Mr. Bodmer, of the Britannia Foundry, Manchester (who has, on former occasions, obtained patents for improvements in the steam-engine), has favoured us with the drawings and description of certain improvements, which may be applied to locomotives, and in marine-engines, but most particularly applicable in stationary engines for pumping water, raising bodies, and for blowing and exhausting air. Without diagrams it may be difficult to convey a correct view of the entire apparatus, but we will endeavour to give a general description of the improvements, without entering into complex detail. We will suppose the engine to be applied to a shaft for raising mine stuff, pumping water, &c., the steam cylinder is placed directly over the pumps in the shaft, and the piston-rod coming through the bottom, works direct upon the rods, thus dispensing with the beam and its apparatus; the valve box is fixed to the flat part of the cylinder, and is connected with the expansion cylinder by a branch pipe; the arrangement of the parts are such that the expansion piston performs two strokes, while the pistons in the cylinder perform only one, and, therefore, there is occasion for only one expansion piston, instead of two; a rod connects the expansion principle with an eccentric on the fly-wheel shaft, to which a governor may be applied; the arrangement of wheels and pinions for working the air-pump, &c., is such, that for every stroke of the pistons, the air-pump, force-pump, &c., must perform two strokes, by a system of wheels and pinions, the power is transferred from the descending piston to the ascending one, compelling the two pump-rods to work at exactly the same speed, and exercise no more power upon the descending ram, than what will be necessary to overcome the difference of weight between the descending pump-rods, and the ascending water in the pipes. Two wheels are fixed upon the shafts, which are strong enough to support the whole weight of the pump-rod and the ram, in case of accident, but in ordinary working they have only to resist so much power as will be transferred from one pump-rod to the other. The fly-wheel is heaviest in that part, where it has to lift the crank pins over the centre, by which means the direct lift from the pistons to the pump-rods, is connected with the crank motion, and enables the engine to be worked at almost any reasonable speed, as there is no fear of the pistons striking against the bottom or top of the cylinders, or the pump valves shutting or opening too suddenly, and the arrangement admits of a much higher lift. In cases where the winding of the coal, and the lifting of the water, has to be performed in the same shaft, a novel arrangement of winding gear is adopted, the fly-wheel is a spur-wheel, and gears into a pinion on a shaft, on which two bevel-wheels are running loose; on the bosses of these wheels, spur pinions are fixed, which gear into spur-wheels, to which the rope pulleys are either fixed or cast. On the bevel-wheels rims are cast, turned cylindrical on the inside; when the shaft is running at any speed, by means of a lever the set screws or arms being brought at right angles with the shaft, will have forced segments (which are of cast-iron, covered with copper) against the inside of the rim, and thus compel the bevel-wheel to revolve with the shaft. The segments above-mentioned slide with their projections in slots on a disc fixed to the shaft, and which, by a key in its bush, compels the bevel-wheel to revolve with the shaft, and, by these means, while one bevel-wheel is in connection with the shaft the other will run loose. It is hardly possible to describe the more minute parts without a drawing, but it is so arranged that the lever above-mentioned cannot be moved from one position into the other, without stopping the winding gear, and the moment the lever is disengaged, by means of a click or by hand, a weight on it stops the winding gear. The guide pulleys are placed in any convenient way above the engine, and over them the ropes are taken in the usual manner. The whole improvements are of the most ingenious description, directly applicable to the object in view, and reflect much credit on the perseverance and mechanical, as well as scientific, attainments of the inventor.

COPPER MINE IN SOMERSETSHIRE.—An undertaking which now bids fair to alter the feature of the beautiful scenery of Kingston, and which promises to be of influence and importance to the interests of Taunton, has been entered upon by some spirited individuals. It has been long thought that the Bloomfield hills are a copper district, and the person who has chiefly directed attention to this highly interesting feature is Andrew Crosse, Esq. A number of men, some of whom are from Cornwall, have been for some weeks at work, sinking, or rather re-opening, a shaft and driving an adit, which was many years ago commenced by Mr. Crosse. Within these few days the miners have come on a fine copper lode, at the very trifling depth of forty feet—a circumstance very unusual even in Cornwall, where better appearances are sometimes not seen at a less depth than from 1000 to 1200 feet, and there is every indication that the lode will turn out to be a rich one. It is intended to erect a steam-engine, and more miners are to be forthwith brought to the place of action, where they work day and night. Should it turn out to be what it promises, it must necessarily add largely to the fortune of Mr. Crosse. The lode is highly impregnated with yellow sulphuret of copper.—*Falmouth Packet.*

Mining Correspondence.

ENGLISH MINES.

EAST WHEAL ROSE MINING COMPANY.

Aug. 11.—An account held on the mine of profit and loss for May and June:
 Dr.—Cost for May and June £4,410 14 1
 Merchants' bills 1,585 4 8
 Dues 1,159 15 7
 Cargill adventurers, 7668 kibbles 69 0 2—7,595 14 6
 Cr.—By balance £2,013 16 1
 Proceeds of lead ore from April 30 to June 27 17,767 17 6
 Cargill adventurers agency and water charges 127 14 1
 Ditto three-quarters profit 653 10 7—20,602 18 3
 Showing a balance in favour of the mine of 13,007. 8s. 9d.; from which deduct dividend of 88s. per 1-128th share, paid 11th August, 10,880s.—leaves a balance to next account of 2127. 3s. 9d.

BEDFORD UNITED MINING COMPANY.

Aug. 11.—At Wheal Marquis, the sumpmen are altering the pitwork; there has been but little done in the seventy fathom level east or west since my last, in consequence of stopping the engine for required alteration of pitwork. The lode in the fifty-eight fathom level east is two feet wide, composed of spar, muncie, and good stones of ore; and in the stopes east of the western winze in 17 fathoms the lode is still worth 18s. per fathom. The lode in the rise, in the forty-seven fathom level west, is two feet wide, and worth 8s. per fathom. The pitches are without alteration. At Ding-Dong, the lode in Thomas's engine-shaft is about two feet wide, composed of spar and muncie, with good stones of copper ore. At Wheal Tavistock the lode in Phillips's engine-shaft is two feet wide, composed of fine gossan, spar, and ore. In the twenty-five fathom level west the lode is 2½ feet wide, producing saving work. J. PHILLIPS.

GUNNIS LAKE MINING COMPANY.

Aug. 11.—At Chisworthy, there is no alteration of importance in Bailey's engine-shaft. The lode in the adit level is much improved, being about fifteen inches wide, composed of gossan and spar, with spots of copper ore in places, and altogether very kindly. W. RICHARDS.

HARROWBARROW OLD MINE.

Tavistock, Aug. 12.—We are getting on with the smith's and carpenter's shops and general surface work, not doing anything underground (except on tribute); it is our intention to do as little as possible in the shallow levels, until we get the engine up, and the water in fork, so as to sink the engine-shaft to the junction of the lodes. The main beam cylinder and other heavy parts of the engine are cast, and also most of the wrought-iron is forged, and the engineers are busily engaged in fitting it up. B. COOKE.

HARROWBARROW CONSOLS.

We have cleared and secured in July twenty-three fathoms of the deep adit level, through a large lode, composed of muncie, iron, peach, flookan, with some spots of silver-lead and copper ore, but not rich; this point is suspended for some time. The tributaries in the back of this lode are working well, the lode being five feet wide, composed of muncie, peach, and copper ore. Brewer's shaft is now sinking; it has not been sunk much since last report, being waiting for whim pulleys. We calculate on the water leaving this shaft as soon as the engine works at Harrowbarrow Old Mine, and we have suspended some operations until that time. B. COOKE.

TRELAUNY CONSOLS MINE.

Since our last report, the seven fathom level east has been driven four fathoms, through a lode two and a half feet wide, composed of muncie, peach, spar, and copper ore. The lode in the seven fathom level west is two feet wide, containing muncie, peach, spar, and copper ore—a kindly lode, but not rich. The water is so quick that the machine is always at work, and the windlass half its time drawing water. We cannot keep it with manual labour, and from what has been already seen, I recommend a steam-engine at once.—B. C.

WEST HOLMBUSH MINE.

We have driven eighteen fathoms through a killas country; the ground continues favourable for driving. We are at present paying 18s. per fathom, and have from twenty-five to thirty fathoms further to drive to cut the lode. In shodding north of the sett, we have cut a small but promising lode.—B. C.

GREAT WHEAL WILLIAMS MINE.

We have cleared and secured twenty-three fathoms in the Hartwell adit on the lead lode, which is large, composed of muncie, flookan, and iron, a very promising lode. Shodding in the centre of the sett, a copper lode has been cut of great promise; we are tracing it away on the back to the Coombe Vale low ground, so as to bring up an adit on the same. B. COOKE.

BACHELOR'S HALL TIN MINE.

Near Princes Town, Dartmoor.—We have cleared the deep adit fifty-four fathoms through a soft granite stratum; the lode is about two feet wide, presenting a promising appearance. We have cleared the shallow adit home to the old workings; we cannot say much of this, as the lode is all taken away for several feet wide. B. COOKE.

HOLMBUSH MINING COMPANY.

Aug. 12.—In the 100 fathom level, west of Hitchens's shaft, the lead lode has much the same appearance; in the north end the lode is fifteen inches wide, and worth 10s. per fathom; in the different stopes, in the bottom of this level, no lode has been taken down during the past week; in the stopes, in the back of the 100 fathom level, the lode is eighteen inches wide, and worth 25s. per fathom. In the ninety fathom level, west of Hitchens's shaft, the lode continues small and poor. In the sixty-two fathom level west the lode is six inches wide, producing stones of ore. In the rise against Bray's shaft, in the back of the eighty fathom level, the ground is hard for rising. We are getting on as fast as possible with the new work. THOMAS RICHARDS.

EAST TAMAR CONSOLIDATED MINES.

Aug. 12.—The engine at Whitsun is not at work yet, owing to the few trifling things which have not arrived: I sent to Mr. West, at St. Austell Foundry, last Friday, for them, he is not returned yet, and we are waiting every day to put her to work; all the pitwork is down, and everything ready, except what Mr. West is sent to for. We have cleared many more fathoms in the deep adit at Whitsun, but have not discovered any more whole ground; it is all worked away. In clearing the deep adit south, at Charlotte's, we have discovered some more whole ground, which will set at tribute; the pitches we have already set are looking well. We have commenced dressing at Fursill; the work is turning out better than we expected. We are still cutting down the shaft, &c., at this mine as fast as possible; we cannot take away any lode yet, as there is no room for the men to work. We are informed this morning that the vessel is in the river with Fursill engine, which I expect will be at our quay on Wednesday next. B. ROBINS.

WEST WHEAL JEWEL MINING ASSOCIATION.

Aug. 11.—In the 100 fathom level south we have intersected Wheal Jewel lode in the past week, but have not cut through it; in the west, on same lode the lode is six inches wide, composed principally of spar. In the eighty-five fathom level west on ditto, no lode taken down in the past week. In the seventy fathom level, west on ditto, the lode is worth 10s. per fathom. In the fifty-seven fathom level the lode is worth 10s. per fathom. In the eighty-five fathom level, west on New South lode, the lode is one foot wide, still composed of gossan and spar. In the forty-two fathom level, on Buckingham's lode, we have intersected the little cross-course, and are now driving south to cut the lode east side of it. In the thirty fathom level, east on Morcom's lode, the lode is eighteen inches wide, composed of gossan and spar; in the thirty fathom level west, on Tolcarne lode, the lode is without alteration since our last. In Wilkinson's engine-shaft, sinking below the fifteen fathom level, the lode is three feet wide, composed of spar, muncie, and stones of ore. S. LEAN.

TRELEIGH CONSOLS MINING COMPANY.

Aug. 9.—Christie's shaft, below the eighty fathom level, is sinking in the country, the ground favourable. In the eighty-five fathom level, east of sump winze, the lode is eighteen inches wide, worth 16s. per fathom. In the ninety fathom level, west of ditto, the lode is three feet wide, much the same, worth about 30s. per fathom. Garden's shaft, below the eighty fathom level, is sinking in the country. In Good Fortune shaft, below the seventy fathom level, the lode is two and a half feet wide, producing stones of ore not of much value. In the seventy fathom level, west of Good Fortune, the lode is two feet wide, rather improved in appearance since last week, there are still stones of ore. In the winze below the sixty fathom level west the lode is twenty inches wide, with stones of ore; in the rise above the sixty fathom level west, the lode is two and a half feet wide, worth 12s. per fathom. In the fifty fathom level, west of Symons's, the lode is two feet wide, with stones of ore; the fifty fathom cross-cut, north from ditto, is driving to cut north Shangar lode; in the winze below the fifty fathom level, east of ditto, the lode is two feet wide, worth 8s. per fathom. In the thirty-four fathom level, west of ditto, the lode is about one foot wide, but little ore. In the twenty fathom level, west of ditto, the lode is twenty inches wide, with ore and muncie, rather improved in appearance; in the adit, west of ditto, the lode is twenty inches wide, kindly, with stones of good ore. We hope to sample next week about 140 tons of ore; one parcel from Christie about 50 tons good ore. W. SYMONS.

CORNUBIAN MINING COMPANY.

Aug. 12.—Chiverton lode, in the eighty-six fathom level, going west of Murray's engine-shaft, is improved since my last report of the 4th inst.; it is now worth about one ton and a half of lead per fathom; the eastern end at this level at present is unproductive; the cross-cut here, driving north to cut the north lode, is in favourable working ground for lead. There is nothing new this week to notice in reference to the tribute department. R. ROWE.

HAWKMOOR MINING COMPANY.

Aug. 11.—Hitchens's engine-shaft is 15 fms. 1 ft. 6 in. below the surface; the lode or branch met with in the shaft alluded to in my last report is much improved in appearance, being one foot wide, composed of spar, muncie, and yellow copper ore. We purpose cutting a plat at the fifteen fathom level, and drive on its course, which will speedily prove if it is the main lode or not. I hope to have the pumps ready to set the western shaft to work on Saturday next. P. RICHARDS.

CALLINGTON MINING COMPANY.

Aug. 11.—Johnson's engine-shaft is sunk about six fathoms below the 100 fathom level; the ground is more favourable for sinking than it has been for some time past; driving north at this level the lode is worth 5s. per fathom; in the south end it is worth 6s. per fathom. In the ninety fathom level, driving north, the lode is worth 4s. per fathom; in the south end it has not been taken down. In the eighty fathom level, driving north, the lode is producing silver-lead ores. In the seventy fathom level, driving south, we are opening tribute ground. At the north mine, the ground continues of a congenial character for lead at the ninety fathom level; in the north end the lode is worth 3s. per fathom; in the south end it is worth 12s. per fathom. In the eighty fathom level the lode is worth 3s. per fathom. In the seventy fathom level the lode is worth 4s. per fathom. In the winze sinking below the sixty fathom level the lode is worth 4s. per fathom. J. T. PHILLIPS.

WHEAL SARAH MINING COMPANY.

Aug. 9.—I have visited and spent the week at this mine in surveying and in carefully examining the lode, more especially its composition at the points apparently leaving the quarry. The result of any assays shall be made known to you in my next report. The lode in the engine-shaft is four feet wide, almost wholly composed of quartz, hornstone, and compact carbonate of iron, containing minute crystals of galena; the rock on both sides of it continues hard, and it is consequently unfavourable for sinking. The ground at the south end, at the twenty fathom level, is considerably improved, and the lode, which is also soft, is composed mostly of gossan, accompanied by a little lead; the lode in the north end is traversing a softish clay slate, very favourable for exploring; it is about three feet wide, consisting of a soft blue clay and muncie spotted with ore. We have cut the lode in the old adit, driven north-east for that purpose; it is about two feet wide, presenting the appearances as it does in other parts so near the surface. The ground being soft, we propose extending a level a few fathoms west on course of it, when we shall be able to report more fully on it next week. The lode in the shaft, sinking in the eastern ground, is four feet wide, but it is at present disordered, owing to oblique veins of quartz intersecting it. JOHN PRINCE.

STRAY PARK AND CAMBORNE YEAN MINING COMPANY.

Aug. 11.—In the seventy fathom level west the lode is one foot wide, with stones of ore. In the eighty ditto the lode is one foot wide, worth 10s. per fathom; in the winze in ditto the lode is two and a half feet wide, worth 80s. per fathom. In the ninety fathom level west the lode is one foot wide, worth 10s. per fathom. In the 100 ditto the lode is two feet wide, worth 20s. per fathom. In the 110 fathom level the lode is two feet wide, worth 10s. per fathom; in the winze in ditto the lode is three feet wide, worth 25s. per fathom. In the 120 fathom level west the lode is two feet wide, worth 15s. per fathom; in the 120 ditto east the lode is small and poor. In the 140 fathom level north the ground is hard, and near the lode. In the 150 fathom level east the lode is split into small veins, worth 6s. per fathom; ditto west the lode is small and unproductive. In the 180 ditto south the ground is very hard. The tribute ground is looking very well, and the next sampling will be the best we have ever had. R. EUSTICE. E. RALPH.

UNITED HILLS MINING COMPANY.

Aug. 8.—In sinking Williams's shaft we shall carry the south part of the north lode, which was cut about a fortnight since; if it continues its present underlay, from the present appearance of the lode, it is worth 50s. per fathom. The eighty fathom level, east of Williams's shaft, driving south to cut the south part of the lode, is worth 40s. per fathom; in the eighty fathom level, west of ditto, the lode is three feet wide, not producing any ore at present. In the seventy fathom level, east of eastern shaft, the lode is eighteen inches wide, producing a small quantity of ore, worth 5s. per fathom; in the seventy fathom level, west of diagonal shaft, the lode is three and a half feet wide, two feet on the south part of ore coarse quality, worth 6s. per fm.; west of James's, we are driving to cut the south part of the lode; diagonal shaft, under the seventy fathom level, is sinking to the north of the lode, ground still hard. In the sixty fathom level, east of eastern shaft, the lode is three and a half feet wide, two feet ore of fair quality, worth 16s. per fathom; in the sixty fathom level, west of James's shaft, the lode is three feet wide, two feet on the north part ore of average quality, worth 20s. per fathom; in the sixty fathom level, east of Harper's winze, the lode is three feet wide, eighteen inches good ore, improved since last week, worth 20s. per fathom. In the fifty fathom cross-cut the ground is a little harder. In the thirty fathom level, east of eastern shaft, the lode is one foot wide, poor. In the ten fathom level east, the lode is two feet wide, producing but little ore, worth 2s. per fathom. At Wheal Sparrow, in the fifty fathom level, east of Gibson's shaft, the lode is two feet wide, one foot producing some good ore, worth 4s. per fathom; in the fifty fathom level, west of ditto, the lode is two and a half feet wide, producing no ore at present. In the forty fathom level, east of ditto, no lode broken since last week; in the forty fathom level, west of ditto, the lode is two feet wide, producing stones of ore, but not rich. In the thirty fathom level, west of Richards's shaft, the lode is two feet wide, ore throughout. T. TREVENEN. R. WILLIAMS.

SILVER VALLEY MINING COMPANY.

July 31.—I beg to inform you that although the works here have hitherto been carried on with spirit, I regret they are at present retarded, in consequence of the wrought and cast-iron work ordered by Mr. West not having been sent—most, if not all, of the founders in Cornwall and Devon having much more work on their hands than they have been able to accomplish agreeably to their respective engagements; it is, however, probable that the heavy parts of the engine—viz., cylinders, with case, main beam, and boiler—will be on the mine in the early part of next week, they having been shipped last Monday. It will be absolutely necessary to do everything here with all expedition, and endeavour to drain both mines before winter comes in, otherwise it will require much more money to do so. My attention has been called to a tin lode north of the one on which the engine-house is built, yet it is in Silver Valley sett; it is traversing a light blue, soft, and decomposing, clay slate, exceedingly favourable for exploring, containing tin of good quality; it appears from the information which I have gathered from some of the old miners of this neighbourhood that a level has been extended on the course of the lode west about fifty fathoms, the exploration of which produced a great deal of tin; these workings were carried on by poor men only, who raised sufficient to maintain large families for several years. We have discovered the opening of the level, and I have requested, in Mr. Johnson's absence, to clear it for his inspection, and as soon as the work is accomplished, you shall know the result. I have also with Captain Richards examined Wheal Sisters (the eastern extremity of Silver Valley), and find that nothing can be done above the deep adit, without sinking a shaft in unexplored ground, most of the timbers having been taken out by persons who searched for silver since the mine was abandoned, and thereby let the shafts and levels above the water crush together. I expect Mr. Johnson on the mine next week, at which time I shall recommend fixing a small wheel at Wheal Brothers, where we have a good stream of water, and with a few pumps to drain the water to the ten fathom level, being the depth of Wheal Sisters, where the ground has been but partially tried, we have found stones exceedingly rich in silver. J. PRINCE. S. RICHARDS.

MINE ACCIDENTS.

Coxhoe Colliery, Durham.—W. Smith was killed by the explosion of a boiler, which he had just examined, and thought "all right."
 Royal Polberou Consols.—J. Bennett fell down the pit, and was killed.
 Delabole Slate Quarry.—P. Boney was killed by a fall of stone.
 Moira Colliery, Ashby-de-la-Zouch.—An explosion took place in the Bath pit, by which three men were killed, and fifteen injured, several dangerously, as not to be expected to recover.—At the inquest held on the bodies, it appeared that the pit was in general very free from foul air and well ventilated.—Mr. J. Woodhouse, the viewer, stated that the colliery was as well ventilated as any mine in Nottinghamshire or Derbyshire; it was observed, from the low state of the barometer on the Friday previous to the accident, that a large quantity of hydrogen had escaped and gathered in the roof, and which, no doubt, exploded at the candle of a man named Bradford, who was dreadfully burned; the men all had Davy lamps.—Verdict, "Accidental Death."
 East Merton Colliery.—J. Thompson was killed by a fall of coal.
 Wigan.—A collier, employed in "robbing the old hollows," at Deanwood, was suffocated by black damp.—R. Dickinson had his thigh broken, and was otherwise injured, by a fall of coal, at Mr. Pearson's colliery, Ince.—J. M. Hugh fell amongst the coal waggons, at Mr. Ellam's Colliery, near Standish, and was so severely injured, that he died shortly after the accident.

Effects of the Late Rains.—Mineral Works in Cardiganshire.—To attempt a description of the effects produced by the late floods of rain in Cardiganshire, would, we feel assured, be deemed by many of our readers as a tax on their credulity, for nothing but actual demonstration could convince or satisfy any party as to the results, of which we offer the following brief notice:—Having visited the Hafod estate, the property of the Duke of Newcastle, on the 3d inst., we were highly delighted with the romantic scenery and the waterfalls, the River Ystwyth taking its course over the rocky glens, and another stream passing to the west, which presents at one point a splendid fall of about forty feet, and, as seen by us, with a torrent of water which, again falling into the stream, is precipitated some 400 or 500 feet. In the chasm formed by the water, are to be seen lodes which have been found productive both north and south of the river, but have never been tried or proved by the Duke. Two or three trials have been made by levels, and in all probability, ere long, Hafod will appear in the Ticketing Paper. We had almost forgotten the object with which we set out, and must at once proceed to narrate some particulars as to the flood, and leave to another opportunity our notes as regards the mineral deposits. At about half-past 3 p.m., in walking along the course of the Ystwyth, we found a sudden rise in the waters to the extent of at least eight feet, the water driving away, with a rapidity which does not admit of calculation, timber, such as launders, and other works connected with the mines in the locality, at once determined that the flood was the result of some accident connected with the pools or reservoirs attached to the mines as a reserve water-power, which is found necessary for working the machinery employed in unwatering the mines, and also as connected with the machinery for crushing and

dressing the ores. Having proceeded onwards to the Cwmystwith Mine, a scene presented itself which we feel ourselves inadequate to describe. There are here four large ponds or pools on the top of the mountain, about one mile and a half distant from the mine—the height being about 550 to 600 feet; these pools extend over some fourteen to sixteen acres, and are in depth some eight to ten feet. The immense body of water brought to bear on them by the severity of the storm caused one of the banks to give way, and an aperture of seven to eight yards afforded the means of escape for the body of water which had been collected. The consequence was, the discharge of no less than upwards of 45,000 tons of water within a few minutes, carrying all before it, and throwing blocks of stone, or rocks, weighing ten to fifteen tons, to considerable heights beyond the course of the stream or fall of water—indeed, a launder, which formed a portion of the water-course, or communication with the water-wheel, which was thirty feet above the water-way, being swept away. It is estimated roughly that the quantity of water thus let loose was equal to nearly 100,000,000 of gallons—while it is satisfactory and pleasing to observe, that, with the exception of the damage done to the embankment and the high road passing through the mines from Aberystwith to Rhayader, involving a cost of some 10s. or 15s., no further damage was sustained—while the force of water carrying away, as it did, the top surface, has, as we understand, laid bare a lode carrying lead, and which may, in all probability, make an ample return for the cost attendant on the accident.

WHEAL MARIA MINE.

As much interest and excitement prevails with reference to this mine, and which is only natural when it is considered that an outlay of some 500s. or 600s. has been attended by the discovery made at so shallow a depth, we have taken some pains to acquire information, on which reliance may be placed; in rendering which we wish to distinguish it from the weekly reports which are furnished as a matter of course in our Journal, and which, in many cases, tend to make a bad [This mine has only been worked to a depth of thirty-nine fathoms from surface—while the market value has been raised to something like 750,000s., as we find the price of shares quoted as high as 740s., or about 1250s. per cent. advance on the cost. The following information, taken from the letter of a correspondent, will enable our readers to judge of the value of the adventure, which has, certainly, well justified the opinions expressed on its being "taken up," and which confers so much credit on the parties with whom it emanated:—

"WHEAL MARIA LODE.—The engine-shaft is sunk from surface thirty-nine fathoms, and, on sinking another fathom, the forty will be driven, having the same congenial killas, and which, it may be observed, has been noticed in sinking to the present point. The shaft has passed through the lode at the twenty-eight fathom level, and, consequently, is to the north, the lode underlying south; but, from its very slight variation, the cross-cut from the shaft to the lode at the forty will, consequently, be very short. In the bottom of the twenty-eight fathom level west, which is at present the deepest level, a winze is five feet wide, and is now down six fathoms, in a splendid course of ore; the winze is five feet wide, and neither north or south wall of the lode is yet seen. The twenty-eight fathom level west has been driven in all thirty-five fathoms, through a fine course of ore, averaging seven feet wide—in the present end the ground is hard and the lode is about two feet wide, with a good course of ore; the twenty-eight fathom level east has been driven in all thirty-five fathoms, through a course of ore, averaging 12 ft. wide—in the present end it is 18 ft. wide, and, to use the words of one of the agents of the lode, is a 'splendid course of ore, sure enough.' The twenty-three fathom level west has been driven about forty-five fathoms, through a course of ore, averaging six feet wide—in the present end the ground is hard, and the lode small and poor; in addition to this it is getting nearly to the surface, being intended for the adit level; the twenty-three fathom level east is driven fifty-eight fathoms, through a fine course of ore; lode in end four feet wide, a fine course of ore. From this it will be seen that there is standing in the back of the twenty-eight fathom level 515 fathoms of ore ground, and such ore ground as cannot be met with in any other mine, either for size or quality. The twenty fathom level east is driven sixty fathoms, through a course of ore averaging six feet wide; it is, however, at present disordered by a powerful cross-course, and, from all appearances, it is thrown about 150 fathoms, perhaps rather more, as in shodding at that distance, south of east, some time since, a large lode was met with, on which a shaft has been sunk about nine fathoms, in which ore has been found, although as to size and quality nothing can be said; the water is here too powerful to enable this portion of the mine to be proved without further machinery. This portion of the sett has been opened on in the backs for upwards of 100 fathoms, with a 'splendid' gossan (and no mistake) in every shodding pit, with a lode averaging eight feet wide, which may be said to be at least promising enough. In the back of the twenty-three fathom level east for all the distance, fifty-eight fathoms, the ground is standing, making 174 fathoms, only seven fathoms having been taken away in the back of the twenty-eight for all the distance: in the back of the twenty-three fathom level west a tribute pitch is working, at 11d. in the lb.; and in the back of the twenty east there are two pitches working, one at 11d. and the other at 8½d., and making good wages. At the extreme point of the twenty east a shaft is sunk on the cross-course. At Wheal Josiah preparations are being made for a steam-engine; this is 600 fathoms east of Wheal Maria, and on the same lode the back has been opened upon about seventy fathoms, and is, if we believe what people do say, a wonder of wonders—lode fourteen to fifteen feet wide, all gossan, while there is every reason to suppose it do 'ride' ore; the western shaft is down about fourteen fathoms, a very large lode, gossan and spots of ore, and the eastern shaft is down thirteen fathoms, precisely the same appearances; the engine will keep both shafts in fork."

MINING IN CORNWALL—THE CARADON DISTRICT.

Sir,—I am quite pleased with "Veritas's" letter in the Journal of this week—it is just what "A Miner" of the preceding week deserved. That there has been great mismanagement about Caradon Consols, there can be no question; four years getting down thirty fathoms from surface, and spent money enough in driving levels, &c., to have tried the mine, and at last have sunk the shaft in hard rock, whereas, if sunk a little east, would have been on a fine cross-course, and sunk four fathoms to one. "Veritas" is right about Craddock Moor engine: it is a good sett, and worthy of a better trial than the engine about to be erected will give her. The Craddock Moor lode has not yet proved successful, while the Caradon Consols lode is known to be the rich and productive one of South and West Caradon.—A LOOKER-ON: Liskeard, August 10.

[We are fully aware of the tardiness which has marked the operations at Caradon Consols, and we believe at one time the "lord" threatened to take possession, unless more activity prevailed. Certainly, they have found one of the fugitive lodes alluded to by "Z. E. D." nearly two years since. We would recommend a further exertion on East Caradon, where seven years have been expended in searching for the lodes by the same manager.]

MINING IN THE EASTERN DISTRICT OF CORNWALL.

Sir,—In your last week's paper I find an article headed "Mining in the Eastern District of Cornwall," bearing the signature of "A. B. C." and from his very impartial and valuable communication it may be supposed the writer knew something of the locality, to enable him to furnish you with so much intelligence—in this he has committed a gross error, for not one of the eight mines which he has noticed, is in the county of Cornwall. I am at all times well pleased to see the brief notices of mines which occasionally appear in your Journal, especially when they are divested of that libellous and partial mode of "R. S. T." or the overdone punning of "A. B. C." who, if I do not identify them as one and the same person, I am not far from the mark. And I really did think, Sir, that you possessed too much respect for your influential Journal to suffer any further remarks relative to "Wheal Anderton, its wheel, fluttering cock on top of the shears, and Capt. Carpenter;" most certainly it would be bad taste to further continue such irrelevant observations. If "R. S. T." will confine his notices to facts and impartiality, he would be conveying general information, which would prove, I have no doubt, acceptable to many of your readers; his patron may require assistance to eulogise his management, but Holmbush will speak for herself; and as to "R. S. T.'s" opinion on mining! he may know tailor's twist from a capstan and whim rope, or brown cloth from gossan, for he has had more experience in the one than the other. I could expose the partiality which has been used by the parties referred to, as well as the injustice to many of the adventurers to which such remarks have a tendency, but I wait for the opportunity, when names shall be given, and the mining public may draw their own conclusions on the remarks of "A. B. C.," "R. S. T.," and—X. Y. Z.: Tavistock, August 13.

MINING IN CORNWALL—THE CARADON DISTRICT.

Sir,—Lest the public should be entrapped and lulled into confidence by your correspondent "Veritas's" statements of the 9th inst., in reference to the quality of the lode discovered at Caradon Consols, I beg to assure you, that the lode intersected at the fifteen fathom level, south of the engine-shaft, and said by him to contain considerable quantities of copper ore, is, in fact, miserably small and poor—so much so, indeed, as to be disowned as being a lode at all; they are now driving further south in search of something which may hold out more flattering indications. There has not been one cwt. of copper ore found in this mine since its commencement. The remarks made by him, in reference to the bearing of the lodes in West Caradon, does not invalidate my statements of the 2d instant, but rather confirm them; the shafts of his malignity does not reach me—they are pointed to another party. The person alluded to, I am fearless in asserting, has more general knowledge than "Veritas," and all his connections. I beg to suggest to Messrs. J. C. and Co. the propriety of erecting, without delay, such a paltry plaything, as the 16-inch engine at Craddock Moor, for the purpose of pumping the contents of South Caradon cellar to their banquetting-room.—A MINER: Liskeard, August 13.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.	
Bank Stock, 210 1/4	Russian, 5 per Cents, 113
3 per Cent. Reduced Ann., 99 1/4	Spanish, 5 per Cents, 27 1/2
Consols for Account, 99 1/4	Brazil, 5 per Cents, 30
Exchequer Bills, 51 3/4	Chili, 5 per Cents, 103
Belgian, 4 1/2 per Cents, 101 1/2	Colombia, 5 per Cents, 17 1/2
Danish, 3 per Cents, 89 1/2	Mexican, 5 per Cents, 34 1/2
Dutch, 4 per Cents, 100 1/2	Peru, 6 per Cents, 40 1/2
Portuguese, Conv., 5 per Cents, —	

SHARE MARKET.

MINES.—In mining speculation there has been very little doing during the week; the market, however, is pretty firm.

RAILWAYS.—The close of the session has, comparatively speaking, closed the speculative mania in these investments, and very few transactions have been entered into; the same stagnation exists on the Continent, which partly arises from the amalgamation of the various companies, so that parties will not embark their capital until they can clearly see the line before them. This system of amalgamation of different companies has the most injurious tendency to depress the market and speculation; we will only allude to the town of Leeds, where, perhaps, there has not been a greater mania for railway schemes in any other part of the United Kingdom. Within the present year no less than three companies of associated sharebrokers have started into existence, numbering from 100 to 120 persons, each company publishing daily its own list of sales and prices, and so profitable has been the business that they have realised on an average from 5000l. to 6000l. each, during the late session. The unexpected association of the Huddersfield, Halifax, and Bradford Union Railway with the Manchester and Leeds Railway Company, has had the most unhappy effect on great numbers of speculators in shares in that vicinity, but as there has been so much speculation it would be rather too lengthy to expose the system—suffice it to say, that there will be many who are victimised when settling day comes. In examining the lists of foreign railways, with a view to see their effect upon the circulation, it is estimated that about 10,000,000 sterling must be sent abroad (France, Belgium, Germany, Spain, Portugal, Italy, and India) in the course of the present year, on account of the shares held in this country, exclusive of what has already been paid. This fact, which seems incontrovertible, should serve as a warning to speculators to be more than ordinarily careful in their operations, and not to rush into the market on the strength of the facilities which the present state of money affords. There are many who entertain a vague notion that the Bank could afford some assistance in case of a crisis, which is most fallacious as that establishment is restricted in its monetary operations. The Standing Order of the House of Commons, passed last session, increasing the deposits from 5l. to 10l. per cent. in railway schemes is not generally understood, as there is an erroneous idea existing that such Standing Order does not apply to companies previously registered, which belief may mislead many, as it must be remembered, on the occasion of the debate on the subject, an amendment, designed to set this limit to the measure, was lost—therefore, the deposit is 10l. per cent. as it was formerly.—Among the numerous lines projected which have yet to pass the ordeal of Parliament in the next session, there are several of considerable importance. The Manchester and Southampton in particular deserves attention; to the town of Cheltenham this railway must prove of great benefit, and, perhaps, equally so in all its local bearings; but it is in a national point of view that it acquires the greatest interest, connecting as it will Manchester, and, in fact, all the north of England, and even Scotland, with the rapidly increasing port of Southampton and thence to Havre, the most important port on the coast of France, by nearly as short and direct a route as could have been marked out had no line of railway existed in its route; the facilities thus afforded for the exportation of articles of merchandise from the manufacturing districts, render this line of the utmost interest to the railway world, and whose progress in Parliament will be eagerly noticed.

The newly proposed South Essex line is one of more importance than at a first view would appear—uniting the town of Barnham, on the River Crouch at the south-eastern point of the county, by not very far from a direct line, Rochford will be brought within thirty-seven miles, and Southend forty from Fenchurch-street; and reckoning from the Pool, Hull, by this route, will be 200 instead of 262, Rotterdam 173 instead of 214, Antwerp 169 instead of 210, Ostend 98 instead of 139, Dunkirk 77 instead of 118, Calais 75 instead of 111, and Margate 42; the Crouch at present forms a good harbour for vessels of large burden, and by throwing out a short pier, a depth of fifteen feet will be obtained at low neap tides. The following is the increase in six months' traffic, ending the present week, as compared with the same period of 1844—viz.:

Eastern Counties	£ 2782	London and Brighton	£ 5372
Edinburgh and Glasgow	3241	London and Croydon	1344
Glasgow and Greenock	911	Manchester and Birmingham	3427
Glasgow, Paisley, and Ayr	2579	Manchester and Leeds	3735
Grand Junction	2319	Midland Company	12291
Great Western	4886	North Union	1332
Liverpool and Manchester	3322	South-Eastern and Dover	13847
London and Birmingham	10233		

JOINT-STOCK BANKS.—Union Bank of London, 13 1/4; National Provincial of England, 37 1/2; Australasia, 32 1/2; Colonial, 15 1/2; London and Westminster, 28 1/2.

MISCELLANEOUS.—Peninsular and Oriental Steam Navigation, 74 1/2; Reversionary Interest Society, 100 1/2; Royal Mail Steam Navigation Company, 48 1/2; Galvanised Iron Company, 10 1/2.

MESSERS. LAMOND'S sale, by auction, of mining shares, at the Hall of Commerce, on Tuesday last, were much better attended than usual, and bona fide sales were said by Messrs. Lamond to have been effected, and in some instances, even better prices obtained than those of the day's quotations—the following are the prices handed—Tamar, 9l.; Cobbe, 15l.; Callington, 27l.; Larnarhoe Wheel Maria, 3l.; Tincroft, 14l.; East Wheel Prosper, 2l.; Caradon Wheel Hooper, 7l.; Rhymer, 35l.; Santiago, 22l.; Wheel Mexico, 5l.; Wheel Albert, 2l.; Crease, 4 1/2l.; Wheel Mary, 6l.; Wheel Concord, 8l.; West Wheel, Concord, 11l.; George and Charlotte, 5l.; East Tamar, 11l.

TUESDAY.—The following are the prices of railway shares:—London and Hereford (1 1/4 pd.), 2l.; Dublin, Belfast, and Coleraine (2 1/4 pd.), 2l. 9s.; Wilts, Somerset, and Weymouth (2 1/4 pd.), 5l.; Londonderry and Coleraine (2 1/4 pd.), 3l. 9s. 6d.; South Midland (2 1/4 pd.), 5 1/2l.; Leicester and Bedford (2 1/4 pd.), 5l. 12s. 6d.; Whitehaven and Furness (1 1/4 pd.), 3l. 3s. 6d.; Clydebank Junction (3 1/4 pd.), 9l.; Dutch Rhenish (3 1/4 pd.), 7 1/2l.; West Flanders (2 1/4 pd.), 3l. 19s.; Italian and Austrian (3 1/4 pd.), 3 1/2l.; Midland, preference (120l. pd.), 17 1/2l.; Oxford, Worcester, and Wolverhampton (2 1/4 pd.), 7l. 9s.; South Wales (2 1/4 pd.), 5l. 4s.; Orleans, Tours, and Bordeaux (4 1/4 pd.), 11l.; Paris and Lyons—Ganneron's (2 1/4 pd.), 2l. 9s.; Great Western (80l. pd.), 230l.; Stockton and Hartlepool, new (2 1/4 pd.), 28l.; Isle of Jersey (1 1/4 pd.), 4l.; Canterbury and Dover (1 1/4 pd.), 11l. 8s.; East Lincolnshire (1 1/4 pd.), 14l.; Pillbury's Atmospheric, (1 1/4 pd.), 11l.

MISCELLANEOUS.—London Gas (50l. paid), 54l.; Commercial do. (5l. paid), 5l. 9s.; Grand Junction Canal (100l. pd.), 112 1/2l.; Oxford do. (100l. pd.), 370l.; Medical Invalid Insurance (2l. pd.), 3l.

FRIDAY.—Londonderry and Enniskillen (2 1/4 pd.), 2l. 10s. 6d.; Cheltenham and Oxford (2 1/4 pd.), 3 1/2l.; Belfast and Ballymena (2 1/4 pd.), 5 1/2l.; Worcester, Shrewsbury, and Crewe (1 1/4 pd.), 3l. 4s.; London, Oxford, and Hereford (1 1/4 pd.), 2l. 3s.; Whitehaven and Furness (1 1/4 pd.), 3 1/2l.; Cornwall (3 1/4 pd.), 3 1/2l.; Jamaica Junction (1 1/4 pd.), 6l. 7s.; Great North of France—Rosamel's (2 1/4 pd.), 2l. 18s. 6d.; Great Luxembourg (2 1/4 pd.), 2l. 7s.; Scottish Central (2 1/4 pd.), 7l. 9s. 6d.; Shrewsbury, Hereford, and North Wales (2 1/4 pd.), 3l. 11s.; Londonderry and Coleraine (2 1/4 pd.), 3l. 5s.; London and South-Western, new (2 1/4 pd.), 15l. 2s.; South Midland (2 1/4 pd.), 6l. 1s. 6d.; Leeds and Thirsk (2 1/4 pd.), 14 1/2l.; Italian and Austrian (3 1/4 pd.), 3l. 11s.; Harwich—Eastern Counties (1 1/4 pd.), 11l. 10s. 6d.; Jersey (1 1/4 pd.), 4 1/2l.; Dublin and Galway (2 1/4 pd.), 2 1/2l.

MISCELLANEOUS.—London, Edinburgh, and Dublin Assurance (2 1/4 pd.), 2l. 13s.; Bank of British North America (50l. pd.), 49l.; Australasia (40l. pd.), 35l.

LEEDS, THURSDAY.—Owing to the interruption of the holidays since we last wrote, our remarks on the state of the market must necessarily be brief. Within the last day or two the weather has assumed a more settled appearance, and prices strengthened yesterday towards the close of the day in London, but as it is evident that the share market is much influenced by the prospects of the harvest, we do not anticipate any immediate movement for the better; three or four fine days would restore confidence and buoyancy to the market. Midlands, Brightons, Croydons, and Manchester and Leeds, have all given way in price. Foreign stocks, almost without exception, are heavy. A better feeling prevails as to some of the lighter stocks; Matlocks, Rugby, North British, are all better, and Edinburgh and Glasgow at 89l. may be included in the same category. West Yorkshires and West Ridings at 14 1/2l. will both, we fancy, improve, and are firm at these quotations. Thirsks have advanced to 16 1/2l. per share, with symptoms of a further movement. Goole is inquired for at 42 1/2l. Dewsbury's offering at 27l. Bradford, old and extensions, are both flatter, at 53 1/2l. and 42l. respectively; they will recover themselves when the call on the extensions is paid. The half-yearly meetings of the various companies already held have been most satisfactory, particularly that of the Brighton; the working expenses of this line have been only

90 per cent. on the receipts for the past six months, and their dividend upwards of 60 per cent. in excess of the corresponding one of last year.

R. B. WATSON, TOOTAL, & BARFF.

LATEST PRICES OF IRISH STOCKS.—3 per Cent. Consols, 98 1/2l. to 98 3/4l.; 3 1/2 per Cent. Stock, 101 1/2l. to 101 1/4l.; 3 1/2 per Cent. Debentures, —, 1 Long Annuities, —, 1 Hibernian Bank, 31l.; Royal Bank, 13 1/2l.; National Bank, 29l.—Armagh, Coleraine, and Portrush Railway, 2l.; Belfast and Ballymena, 6 1/2l.; Cork and Brandon, 6 1/2l.; Cork and Waterford, 14 1/2l.; Dublin and Belfast Junction, 7 1/2l.; Dublin and Drogheda, 10 1/2l.; Dublin and Kingstown, 250l.; Great Southern and Western, 27 1/2l.; Irish Great Western, 24 1/2l.—Mining Company of Ireland, 14 1/2l.—Wicklow Copper Mine, 17 1/2l.—British and Irish Steam, 53l.; Dublin and Glasgow ditto, 44l.; Peninsular and Oriental Company, 37l.

The following are current prices of Railway Shares, not included in the Traffic Table:—

Name of Railway.	Price.	Name of Railway.	Price.
Aberdeen	3 1/2	Oxford and Worcester	7 1/2
Armagh, Coleraine, and Portrush	3 1/2	Perth and Inverness	2
Bristol and Exeter	95 1/2	Portsmouth Direct	4
Brighton, Lewes, and Hastings	25 1/2	Richmond and West End Junction	4
Birmingham and Oxford Junction	4 1/2	Rugby, Worcester, and Tring	2 1/2
Caledonian	10 1/2	South Wales	5 1/2
Cambridge and Lincoln	3 1/2	South Devon	30 1/2
Churnet Valley	5 1/2	Scottish Central	7 1/2
Chester and Holyhead	22	Shrewsbury and Grand Junction	4 1/2
Cornwall	3 1/2	Shrewsbury, Wolverhampton, &c.	4 1/2
Coventry, Bodworth, & Nuneaton	21	Staines and Richmond	4 1/2
Coventry and Leicester	4 1/2	Scarborough	4 1/2
Canterbury and Dover	3 1/2	Scottish Midland	11 1/2
Cheltenham and Oxford	3 1/2	Shrewsbury and Trent Valley Union	3 1/2
Cork and Waterford	14 1/2	South Midland	6
Direct Northern to York	2 1/2	Trent Valley	19
Direct Norwich	8	West Yorkshire	7 1/2
Dublin and Belfast	8	Waterford and Kilkenny	2 1/2
Dublin and Galway	4 1/2	Waterford, Wexford, Wicklow, &c.	1 1/2
Dublin and Mullingar	4 1/2	Welsh Midland	3 1/2
Dundalk and Enniskillen	3 1/2	Wilts, Somerset, and Weymouth	8 1/2
Edinburgh and Perth	12	Worcester, Shrewsbury, and Crewe	30 1/2
Edinburgh and Northern	12	Yarmouth and Norwich	2 1/2
Ely and Bedford	4 1/2	York and Selby	7 1/2
Eastern Union	25 1/2	York and Carlisle	3 1/2
Essex and Suffolk	2 1/2	Boulogne and Amiens	11
Great North of Scotland	25 1/2	Bordeaux and Toulous	2 1/2
Gt. Southern & Western (Ireland)	25 1/2	Ditto, Toulous, and Cetto	2 1/2
Great Grimsby and Sheffield	5 1/2	Dieppe and Paris Junction	12
Guildford, Farnham, and Portsmouth	3 1/2	Central of France	17
Harwich	14 1/2	Dutch Rhenish	8 1/2
Kendal and Windermere	4 1/2	East Indian	6 1/2
Leicester and Bedford	3 1/2	Great Northern of France (Lafitte's)	6 1/2
Lincoln, York, and Leeds	4 1/2	Gt. Northern of France (Hossmann's)	5 1/2
London and York	4 1/2	Jamaica Junction	5 1/2
Lynn and Ely	7 1/2	Lyons and Avignon	2 1/2
Lynn and Dereham	3 1/2	Louvain and Jenappe	4 1/2
Lancaster and Carlisle	5 1/2	Namur and Liege	4 1/2
Londonderry and Enniskillen	2 1/2	Orleans, Tours, and Bordeaux	12
Londonderry and Coleraine	3 1/2	Orleans and Vierzon	16 1/2
Limerick and Waterford	5 1/2	Over Yssel	12
London, Salisbury, and York	25 1/2	Paris and Lyons (Ganneron's)	2 1/2
Manchester, Buxton, and Matlock	6 1/2	Paris and Lyons (Lafitte's)	3 1/2
Midland, Birmingham, and Derby	13 1/2	Paris and Strasbourg (Ganneron's)	2 1/2
Newcastle and Berwick	23 1/2	Paris and St. Quentin	2 1/2
Newcastle New (Branding)	37	Rouen and Havre	31
Newark and Sheffield	22	Royal North of Spain	2 1/2
Newry and Enniskillen	2 1/2	Sunderland and Middlesbrough	10 1/2
North British	91 1/4	Strasbourg and Basle	10 1/2
North Kent	24 1/2	Tours and Nantes (Mackenzie's)	2 1/2
Norwich and Brandon	24 1/2	Ditto (Lefevre's)	4 1/2
North Wales Mineral	18 1/2	Verona and Ancona	3 1/2
North Wales	34	West Flanders	3 1/2
North Staffordshire	4 1/2		

METAL TRADE REPORTS—See Fourth Page.

COPPER ORES.

Sampled on the 23d of July, and sold, on the 13th August, at Swansea.

Mines.	Tons.	Prod.	Stand.	Price.	Mines.	Tons.	Prod.	Stand.	Price.
Cobre	105	125	92 1/2	£9 10 0	Cuba	31	23 1/2	87 1/2	£13 2 0
ditto	100	125	93 1/2	9 9 0	Chili	50	51 1/2	88 1/2	£13 2 0
ditto	94	125	93 1/2	9 9 0	ditto	46	51	89	£13 2 0
ditto	90	125	93 1/2	9 9 0	ditto	44	51	89	£13 2 0
ditto	67	125	93 1/2	9 9 0	ditto	38	90	90 1/2	£13 2 0
ditto	62	125	93 1/2	9 9 0	ditto	32	91	91 1/2	£13 2 0
ditto	27	223	89 1/2	17 10 0	ditto	50	30	91 1/2	£13 2 0
Bearh. Killgoulin	102	102 1/2	8 7	0	S. Jose in Cobre	80	145	93 1/2	11 8 0
Bearhaven	96	91	104 1/2	8 6	ditto	55	23	89 1/2	18 6 0
ditto	95	95	104 1/2	8 6	ditto	38	20 1/2	89 1/2	15 10 0
ditto	89	10	104 1/2	8 6	ditto	28	11 1/2	96 1/2	9 1 0
ditto	60	63	111	5 5	Ballymurtagh	88	4	131 1/2	3 0 0
ditto	12	93	103 1/2	7 10 0	ditto	44	4	131 1/2	3 0 0
Santiago	120	120	92 1/2	13 4 0	Aust. Kapunda	50	27 1/2	54 1/2	23 10 0
ditto	114	173	90 1/2	13 15 0	ditto	43	29 1/2	54 1/2	23 10 0
ditto	109	173	90 1/2	13 15 0	ditto	33	35	93	30 7 0
ditto	94	173	90 1/2	13 15 0	Llandidno	51	4	126 1/2	3 8 0
Knockmahon	97	14	90 1/2	11 13 0	ditto	30	11 1/2	103 1/2	9 13 0
ditto	71	81	108 1/2	6 14 0	Cronebane	53	62	113 1/2	5 8 0
ditto	70	82	107 1/2	6 15 0	ditto	22	75	110 1/2	5 13 0
ditto	67	82	107 1/2	6 15 0	Tigrony	15	64	114 1/2	5 8 0
ditto	62	64	113 1/2	5 5 0	Kilduane	72	7	111 1/2	6 2 0
ditto	57	43	121	3 10 0	ditto	3	45	119	3 11 0
Cuba	110	14	92	10 12 0	Laxey	42	64	112 1/2	5 1 0
ditto	82	14	93	10 15 0	Aberdovey	24	94	106 1/2	7 17 0
ditto	76	21	88 1/2	16 5 0	ditto	1	20 1/2	92 1/2	17 0 0
ditto	48	22 1/2	88 1/2	17 16 0	Mollard	2	10	103 1/2	8 2 0
ditto	41	24 1/2	87 1/2	19 14 0	ditto	1	6 1/2	111 1/2	4 14 0

Mines.	Tons.	Prod.	Stand.	Price.
Cobre	565	565	8 0	£9258 8 0
Bearh. Killgoulin	473	3695	2	0
Bearhaven	437	5921	10	0
Santiago	424	3132	11	0
Knockmahon	388	5496	3	0
Cuba	280	10294	0	0
Chili	201	2792	10	0
San Jose in Cobre	132	495	0	0
Ballymurtagh	132	495	0	0

Total tons, 3342.—Total amount, £43,216 12s. 6d.

COMPANIES BY WHOM THE ORES WERE PURCHASED.	Tons.	Amount.
English Copper Company	431 1/2	£2631 16 9
Freeman and Co.	76	2142 8 0
P. Grenfell and Sons	183	3465 5 6
Sims, Williams, Nevill, Druce, and Co.	223	2613 8 0
Virian and Sons	1213	10504 7 0
Williams, Foster, and Co.	1215 1/2	17859 6 9

Copper ores for sale August 27.—Santiago 89—76—69—57—49—47. Bearhaven 123—105—74. Knockmahon 102—84—79. Ballymurtagh 88—53—49—44. Cronebane 79—52—40—32—21. Tigrony 80—60—1. San Jose in Cobre 76—56. Australia 50—29—8—14. Cloga 39—2. Connoree 30—3. Lackamore 28—6. American 10. New York 6.—Total, 1962 tons.

COPPER ORES.

NO SALE on Thursday last, August 14.

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Wheat Maria 1229.—West Caradon 429.—Tresavan 417.—Per Consols 207.—Trethellan 180.—Holmshill 173.—Fowey Consols 161.—Bedford Mines 108.—Wheat Unity Wood 85.—Wheat Gortland 71.—West Trethellan 41.—Total, 3009 tons.

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—United Mines 1691.—Hallenbeagle 454.—South Caradon 330.—Wheel Sisters 183.—Fowey Consols 163.—Treleigh Consols 162.—Penstrathal 98.—Wheat Prudence 85.—Freg-braws 81.—West Fowey Consols 72.—North Downs 25.—Total, 3344 tons.

TIN STUFF

Sold at Marazion, August 11, 1845.
Trevelyan Mines—400 barrows—value £294 11s. 0d.

WORK PERFORMED BY CORNISH ENGINES.
The number of pumping-engines reported for the month of July 39—the quantity of coals consumed being 2594 tons, lifting, in the aggregate, 26,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 56,000,000 lbs. lifted 1 foot high by the consumption of a bushel of coal.

THAMES TUNNEL COMPANY.
The number of passengers who passed through the Tunnel in the week ending Aug. 9, was 22,524; amount of money, £93 17s. 6d.—(Last year, 1477 6s. 0d.)

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDIENT MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the Kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S. &c.—"I am very glad to hear that your recommendations have been of any service to me; and I am quite willing that you should employ my name as evidence of this." Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Cornhill, London.

TO ENGINEERS, RAILWAY CONTRACTORS, &c.—The PATENT RIVET COMPANY OF SCOTLAND, 25, BROWN STREET, Glasgow, MANUFACTURE (under the superintendence of the acting partner, Mr. James G. Gilson) all descriptions of BOILER and TANK RIVETS, WOOD SCREWS, SCREW BOLTS and NUTS, RAILWAY SPIKES, &c. Orders executed with despatch, and forwarded to all parts of the United Kingdom.

PRICES OF MINING SHARES.

BRITISH MINES.				BRITISH MINES—continued.			
Shares.	Company.	Paid.	Price.	Shares.	Company.	Paid.	Price.
235	Andrew and Nanglins	23	60	96	Trevelyan	10	230
95	Bell	—	10	128	Tockenbury	102	100
4000	Bedford	24	24 5/8	256	Trenow Consols	—	130
100	Botalack	175	480	120	Trevelskey and Barrier	61	250
10000	New British Iron, regis.	10	25 6	5000	Treleigh Consols	54	3
—	Bitto ditto, scrip	10	20 3/4	9650	Tarnah Consols	3	8
8000	Blancavon	50	35	6000	Thurcroft	7	13
120	Brewer	—	10	128	Trevelskey	18	24 1/2
128	Budulick Consols	—	35	1024	Trelawney Consols	18	24 1/2
100	Bich Gwmerfin	20	60	256	Ting Tang	17	29
100	Barristown	17	300	4000	United Hills	5	5
5000	Con.Trefoil Mining Ass.	24	1	100	United Mines	1000	900
128	Cosheen	20	200	6000	Wicklow Copper	5	17 1/2
114	Charlestown	—	280	512	West Fowey Consols	40	35
3200	Carnewan Lead Co.	3	24	384	Wheel Franco	50	65
128	Confort	—	35	128	Wheel St. Andrew	65	20
2560	Co's Kitchen	—	10	128	Wheel Virgin	—	8
1000	Carr Brva	15	80	256	West Carleton	40	37 1/2
1000	Callington	18	26	3845	West Wheel Jewel	104	5 1/2
956	Caradon Wh. Hooper	3	9	120	West Threlahan	5	40
128	Caradon Consols	45	160	128	Wheel Rose	40	20
256	Caradon Copper Mine	44	10	256	West Wheel Tolgus	6	10
128	Caradon Mines	3	70	1000	Wheel Harriet	—	300
256	Caradon United	16	16	128	Wheel Penrose	—	16
128	Craig Brawa	120	100	128	Wheel Providence	10	16 1/2
128	Combarian	—	100	128	Wheel Clon	—	500
340	Cradock Moor	—	65	256	Wheel Albert	10	15
128	Cundurrow	10	15	128	Wheel Basset	10	30
186	Dolcoath	—	80	128	Wheel Acland	13	14
1000	Durodo	2	5	256	Wheel Sisters	224	100
10000	Durham County Coal	45	9	99	Wheel Seaton	130	450
128	East Pool	5	55	200	West Seaton	—	30
94	East Wheel Crofty	—	400	128	Wheel Henry	—	10
128	East Wheel Rose	50	1600	128	Wheel Hope (Zennor)	14	18
256	East Wheel Alfred	2	10	256	Wheel Hope	7	7
9000	East Tamar Consols	1	3	4000	Wheel Marazion	24	24 1/2
512	Fowey Consols	—	110	130	Wheel Trelawny	15	185
244	Grambler & St. Aubyn	—	70	256	Wh. Mary Ann	5	45
100	Great Consols	1000	500	256	Wheel Norris	63	10
1000	Godolphin	—	35	256	Wheel Trevenna	4	4
256	Gonamen	6	122	107	Wheel Trevelion	10	5
128	Green Valley	17	5	128	Wheel Catherine	54	14
20000	Graveland Consols	—	114	256	Wheel Providence	—	74
100	Grogrinon	5	10	256	Wheel Robins	13	10
4000	Gunnis Lake	1	3	256	Wheel West Treasury	13	5
128	Gover	23	200	256	Wheel Wheel Shephard	2	10
10000	Hibernian	124	1	128	Wheel St. Cleer	174	50
1000	Holmbush	14	26	128	Wheel Reeth	1	60
128	Hallenbeagle	—	50	128	Wheel Gill	174	20
1000	Hanson	5	3	128	West Caregill	2	15
100	Hawkinson	2	44	256	Wheel Mary	1	15
256	Hawthorn Consols	14	5	256	Wheel Concord	4	10
256	Headfoot	—	150	128	Wheel Venland	24	104
160	Lavan	—	150	256	Wheel W.B. Evershed	—	5
128	Lanarth & Penstruthal	—	150	128	Wheel Prospect	4	9
1000	Lewis	5	6	256	Wheel Victoria	2	10
128	Ludcott	3	3	240	Westerlake	3	3
256	Lambe	5	134	1024	Wheel Maria	1	500
5000	Mining Co. of Ireland	7	144	256	Wheel Fortescue	14	15
2560	Marke Valley	10	5	256	West Wh. Maria	—	16
1000	Materthur Consols	104	27 1/2	128	Wheel Pollard	5	20
70	North Boskeay	—	610	512	Wheel Sarah	24	—
260	North Holmbush	—	15	256	Wheel W.B. Evershed	24	—
100	North United	38	45	256	Wh. Mexico	—	9
256	North Wheel Rose	224	50	256	Wheel Boscantin	24	9
256	North Treburget	1	5				

The Mining Journal.

No. 521.]

ENLARGED SHEET.

[AUGUST 16.]

THE ELECTRIC TELEGRAPH.—COOKE AND WHEATSTONE PATENTS.

The ELECTRIC TELEGRAPH has been adopted on the following LINES:—
By ORDER OF THE LORDS OF THE ADMIRALTY, on the South-Western Railway and Government Telegraph from the ADMIRALTY, Whitehall, to PORTSMOUTH, about NINETEEN MILES.

On the same line, as a Commercial Telegraph from Nine Elms to the Port of Southampton, 77 miles—with a branch to Gosport, 15 miles.
On the London and Blackwall Railway.
Great Western Railway, from London to Slough, 18 miles—the Windsor Telegraph.
Yarmouth and Norwich Railway, a "Single Way," 20 miles.
London and Dover Railway, from Tunbridge to Maidstone, a "Single Way," 15 miles.
Part of the Oldham Branch Railway.
Part of the Leeds and Manchester Railway.
Part of the Edinburgh and Glasgow Railway.
The Dalkey (atmospheric) Branch of the Dublin and Kingstown Railway.
London and Birmingham Railway—viz., from Northampton to Peterborough—a "Single Way," 47 miles.

In addition to the above, the Telegraph is about to be laid down on several "single lines" in different parts of England, Scotland, and Ireland.

Mr. Cooke is prepared to grant licences for the use or erection of the Telegraph for entire districts of country, where the boundary can be accurately defined.

Mr. Cooke will also undertake to erect a Telegraph in any part of the United Kingdom for a fixed amount.

For further particulars apply to W. Fothergill Cooke, Esq., Kidbrooke, Blackheath; or to Robert Wilson, Esq., solicitor, 1, Copthall-buildings, London.

PROSSER'S RAILWAY ON WIMBLEDON COMMON.

ALTERATION IN TIME OF RUNNING THE TRAINS.—In future the train will CEASE TO RUN in the MORNING, but CONTINUE TO RUN DAILY, from One till Seven o'clock p.m. This line of railway, of two miles in length, has been laid down at great expense, to TEST THE ADVANTAGES OF PROSSER'S PATENT GUIDE WHEELS. It contains gradients of 1 in 50—1 in 75—and 1 in 200; and curves of the radii of ten chains.—Engineers and persons interested in railways are invited to inspect it.

All particulars may be had of Mr. George Hadley, 36, New Broad-street, City.

PILBROW'S ATMOSPHERIC RAILWAY AND CANAL PROPULSION COMPANY.—Completely Registered.

The Right Hon. the Earl of Essex, Chairman.
The Right Hon. the Earl of Bessborough
G. B. Bolton, Esq.
Captain Britton
Lieutenant-Colonel Gillies
F. J. Lambert, Esq.
Dr. J. G. Hewlett, Resident Director

Directors of Railway and Canal Companies are informed that this company is now READY TO GRANT LICENSES FOR, OR SUPERINTEND THE LAYING DOWN OF LINES ON PILBROW'S ATMOSPHERIC PRINCIPLE.

The advantages offered by this method of propulsion are cheapness, increased speed, and safety, over every other existing system, whether locomotive or atmospheric. Leakage is entirely avoided, the tube being buried. Also an immense saving, as well in the construction as in the working of lines, not requiring tunnelling, levelling, or embankment. The surface requires but little more preparation than for the common roads.

The application of this method of propulsion to Canal Navigation will be attended with incalculable advantages.

Its simplicity, efficiency, and simplicity, will be demonstrated, and explanations given, at the offices of the company, 6, King William-street, London-bridge.

CHARLES COLLINS, Secretary.

HARVEY AND WEST'S

PATENT VALVES.

APPLICABLE TO PUMPS OF EVERY DESCRIPTION.

The superiority of these valves, as economical in respect both of trouble and expense, has been proved by the experience of their GENERAL USE for more than SEVEN YEARS.

The patentees refer to nearly all the water-works, engineers in the kingdom, by whom satisfactory testimonials have been freely given.

The principle adopted is that of "OBTAINING THE GREATEST WATER PASSAGE BY THE LEAST POSIBLE PRESSURE AREA," thereby avoiding the great concussion occasioned by the closing of ordinary valves, and the loss caused by letting in air under them.

Until the invention of these valves (first used at the East London Water-Works), the most economical mode of raising water—viz., by the plunger-pump, and the principle of expansive steam, as practised in Cornwall, was impracticable for water-works purposes.

Sketch A shows the manner in which the valves have been applied to air-pumps of steam-engines.

Sketch B, the manner of their application to pumps for lifting water.

The Valves are shown open in both Sketches.

Address Messrs. HARVEY AND WEST, HAYLE FOUNDRY, CORNWALL.

PRINCIPAL MANUFACTURERS Messrs. HARVEY AND CO., HAYLE FOUNDRY, CORNWALL.

THE TWENTY-FIFTH THOUSAND.

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To the married as well as the unmarried this little work alike affords consolation and cure, and we are doing a service to society in recommending it to general notice.—*Essex and Hertford Mercury.*

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The company formed to construct a railway from Nenagh to the Shannon, have determined upon EXTENDING their LINE to the nearest point of junction with the Great Southern and Western Railway, in the vicinity of Templemore. For this last-named influential company one-fourth of the capital has been reserved.

In the allotment of the remaining shares, parties holding the scrip certificates in the Nenagh and Shannon Railway will have a preference.

Forms to be had of, and application for shares to be made to, Andrew Gifford, Esq., 62, Moorgate-street, London; or John Kempston, sen., Esq., Nenagh Guardian Office, Nenagh, Ireland, on or before the 1st of September next.

62, Moorgate-street, London, August 12, 1845.

FORM OF APPLICATION.

To the Committee of Management of the Extension of the Great Southern and Western Railway to Nenagh.

Gentlemen,—I request you will allot me shares, of £15 each, in the above undertaking, and I hereby agree to accept the same, or any less number that may be allotted to me; and to pay the deposit of £1 11s. 6d. per share thereon, and sign the Parliamentary contract and subscribers' agreement when required.

Name in full
Residence
Profession or business
Date
Name and address of reference

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The object of this undertaking is to supply railway communication to the towns and districts lying between the London and Birmingham and the Great Western Railways, giving them the best means of access to the metropolis, and connecting them also with the northern and eastern lines of railway, as well as with Oxford and the south.

The main line will commence from the London and Birmingham Railway, near Harrow, and passing to the north of Uxbridge, will proceed up the valley by Chalfont, near Amersham and Chesham, to Missenden and Wendover, and thence to Aylesbury; from which place it will extend to Buckingham, and passing near Winslow, and approaching Brackley, will terminate by a junction with the proposed Warwickshire and London Railway, near Banbury.

In addition to the line above described, it is intended also to construct a railway from the central station of the London and Birmingham Railway at Wolverton to Buckingham, and thence through Bicester to Oxford; and in connection with the line here proposed, the Bedford, and London and Birmingham Company, intend to make a connecting line between Bedford and Wolverton.

The proposed Buckingham and London and Birmingham Railway Company—for the construction of a line from Wolverton to Bicester—is amalgamated with this company.

Accurate surveys of the country have been taken by Mr. Robert Stephenson, and it has been ascertained that no engineering difficulty of importance presents itself.

The undertaking has already received the sanction and support of a very large proportion of the nobility, gentry, and proprietors of land through or near whose property it is intended to pass.

It is proposed that these lines should be made with the co-operation, and under the direction and superintendence of the London and Birmingham Railway Company; under a lease, in perpetuity, at 4 per cent. per annum on the outlay, with a conditional arrangement as to the surplus profits.

It is intended to offer the shares in such proportion as the amount of capital will allow of, to the holders of shares in the London, Worcester, and South Staffordshire Railway Company, subject to the approbation of the committee of management, with the exception of such as may be required for parties having local interests.

BUCKINGHAM AND LONDON AND BIRMINGHAM RAILWAY.

The public are respectfully informed, that the company for constructing the BUCKINGHAM AND LONDON AND BIRMINGHAM RAILWAY is AMALGAMATED with the BUCKINGHAMSHIRE RAILWAY COMPANY.

Parties locally interested, who have applied for shares in the Buckingham and London and Birmingham Company, and who may wish to take shares in the Buckinghamshire Railway Company, are requested to make application on or before the 20th day of August inst., to any of the solicitors of the Buckinghamshire Railway.

In consequence of the arrangements with the Buckinghamshire Railway Company, no shares can be allotted, except to parties locally interested.

DIRECT LONDON AND EXETER RAILWAY COMPANY.

[WITH EXTENSION HEREAFTER TO FALMOUTH.]

Capital £3,000,000, in 120,000 shares, of £25 each.—Deposit £1 7s. 6d. per share. With power to raise £1,000,000 more, if necessary.
(Provisionally Registered, pursuant to 7 and 8 Vic., c. 110.)

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COMMITTEE OF MANAGEMENT.
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(With limited power to add to their number.)

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John Braithwaite, Esq., 4, Trafalgar-square, Engineer of the Eastern Counties Railway
BANKERS—Messrs. Currie and Co., 29, Cornhill.

SOLICITOR.—D. E. Colbourne, Esq., 8, Carlton Chambers, Regent-street.

The object of this company is to establish a railway from London to Exeter direct, through Salisbury and other considerable towns hitherto deprived of that great improvement of the age. The most important feature, however, of this undertaking will be, that it will establish an uninterrupted, direct, and speedy communication between the metropolis and our largest maritime ports—Plymouth and Falmouth—and thus form an immediate transit to the extreme part of the west of England. To the shipping interest, both at home and abroad, this facility will be of the utmost importance, and it was should unfortunately arise, the advantages of such a line are evident.

The committee feel the importance of the duty imposed upon them, and rely with confidence on the success of the undertaking, possessing, as it does, the strongest claims for support, whether as a permanent and judicious investment of capital, or as a great national undertaking. It is not intended to comment on the various railway schemes partially affecting the line the committee propose should be adopted, further than to observe, that none of them have been based upon a sufficiently comprehensive view to afford "a direct organic communication" with the metropolis; and it is apparent that an entire line, under the management of one company, is far preferable to any other communication now available or projected. This line of railway is offered to the public as affording, not only an independent and direct intercourse between the metropolis, Exeter, and the various important towns upon it, but will effect a saving of thirty miles and upwards in the circuitous and expensive route by Bristol.

The opinion of Sir Robert Peel is particularly applicable to this project—that the tendency of the improvements which are almost daily introduced, was decidedly in favour of the shortest and most direct lines; and it is deserving of remark, that when the Wilts and Somerset Railway Bill (which has lately received the Royal sanction) was before parliament, its promoters were required to pledge themselves that they should not offer hereafter any impediment to a direct line to Falmouth, being precisely such an undertaking as the one now proposed, thereby proving the importance attached by Parliament to direct communications, and the London and York having obtained the consent of the House of Commons to their bill, after a prolonged opposition, shows the weight attached to direct independent railways.

It is proposed that this railway shall take its course between the Great Western and the South-Western as far as Kingsclere—though it will not in any way interfere with the latter line—its course actually suggested by the Board of Trade, in its fourth Report, sec. 42, by which an opening was made in this very line, stating that there is nothing in the present settlement of existing railways to prevent a shorter or competing line to Exeter being brought forward.

The Direct London and Exeter Company intend to form their terminus in the most central part of London which can be obtained. It will be in the immediate vicinity of Sloane-street and Knightsbridge. It is also intended that this company shall join the railway projected to cross the Thames, and thus effect an immediate connection with a central terminus at Hungerford-bridge.

From the London terminus the line will branch off to or near Hammersmith, Turnham Green, Brentford, Isleworth, Hounslow, Staines, Egham, Bagshot, Ascot, Bracknell, Bifield, Wokingham, Kingsclere, Andover, and Salisbury; Shaftesbury, Sherborne, Yeovil, Crewkerne, Axminster, or from Salisbury to Cranborne, Blandford, Dorchester, Bridport, Axminster, and Honiton, to Exeter.

The line chosen was nearly the one adopted by the Romans; and as they, whenever practicable, adopted the straight line, the committee intend, as near as possible, following their example. This road was also the old mail coach line, until the circuitous course of the Great Western, in the infancy of railway travelling, diverted the traffic from it.

The line of this railway will pass through Staines, as before observed; and it is proposed to form a branch to Windsor, it being represented that that mode of immediate communication with the metropolis will be most congenial to the inhabitants of that town and its vicinity. The committee are, therefore, desirous of accomplishing that object, and invite the immediate and active co-operation of the landholders and inhabitants of Windsor to this part of their scheme especially.

To the sporting world also, this undertaking offers a desideratum which has long been felt; it is calculated the number of persons annually visiting Ascot and Egham races exceeds 250,000; this line will pass in the immediate vicinity of these race-courses; and near Ascot a handsome and commodious station will be erected for the accommodation of the public. The traffic tables which are now in course of preparation will, when completed, be published, but from the official returns, and other sources which have come within the committee's cognisance, a very ample interest for the capital necessary for this undertaking is shown, and as the traffic, from the great accommodation this railway will afford to every description of property in the district through which it will pass, will be greatly increased, so also will be the financial returns.

The rejection of the bill before Parliament of the Plymouth and Falmouth line, induces the committee to propose an immediate extension of the direct line from Exeter to Falmouth. Prospects for this extension will be published as soon as the plans and surveys are matured, and for the allotment of shares for this part of the line preference will be open to the original holders of shares in the Direct London and Exeter Company, and the landowners on the Falmouth line.

The entire line has been partially surveyed, and the essential benefit arising from avoiding the elbow of Bristol has been ascertained beyond a doubt. The plans, sections, and books of reference will be ready within the time prescribed by the Standing Orders of Parliament, and application will be made for a bill to incorporate the company early in the next session. The usual power will be taken by the Act to allow interest at 4 per cent. per annum, after passing the Act, on the amount of the subscriptions paid up, and that no subscriber shall be answerable for more than the amount of his deposit until the Act be obtained, and then not beyond the amount of his subscription.

In case Parliament should not sanction the present undertaking, which every active means will be taken to secure, the money deposited, deducting the necessary expenses attending the projection, will be returned to the shareholders.

The committee have been in communication with many influential landowners on the line, from whom promises of support have been obtained, and earnestly invite the co-operation and assistance of all parties holding property upon it, desirous of furthering the object in view, whose names, it is requested, may be communicated to the committee or to the solicitor to the company forthwith.

Prospectuses, with forms of applications for shares, may be had at the offices of the company as above, and of the following stock and sharebrokers—viz:

Messrs. Sutton, Gribble, and Sutton, Royal Exchange, London; also
John Langworthy, Exeter; J. B. Munday, Bath; Potter and Co., and Ridsdale and Co., Leeds; Wm. Moore and Co., Huddersfield; Eyre and Shaw, Derby; Silbury and Simpson, Hull; Grayston and Earle, York; Henry Billingham, Wakefield; Hopwood and Palmer, Plymouth; Hall Brothers and Co., Cheltenham; W. W. Dickinson, Newcastle-on-Tyne; W. H. Collis, Birmingham; Myers and Birbeck, Wm. Marshall, and Cardwell and Sons, Manchester; Munro and Co., Edinburgh; John R. Mann and Sons, Norwich; A. W. Moffatt, Edinburgh; Luke Arnold, Bristol; John Thomas Holland, Coventry; James Watson, and Thomas Gray, Glasgow; Roworth and Sheppery, Nottingham; Thomas Crewdson, Liverpool.

The following gentlemen are among those appointed as Local Agents, in furtherance of the interests of the company, from whom prospectuses and applications for shares may also be obtained:—
Egham—Thomas Harvey, Esq.
Bagshot—John Moore, Esq.
Bracknell—Charles Cave, Esq.
Wokingham—Francis Soames, Esq.
Salisbury—Henry Cooper, Esq.

Yeoil—George Hancock, Esq.
Crewkerne—Robert Lowman, Esq.
Blandford—George Moore, Esq.
Bridport—S. H. Gummer, Esq., and Henry B. Fox, Esq.

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Direct London and Exeter Railway Company.
Gentlemen,—I request you will allot me shares, of £25 each, in the above railway, and I undertake to accept the same, or such less number as you may appropriate to me, subject to the regulations of the company, also to sign the necessary legal documents, and to pay, when required, the deposit thereof of £1 7s. 6d. per share.

Name in full
Profession (if any) and professional residence, in full
Residence in full
Date
Reference
Signature of applicant
Witness

DIRECT LONDON AND MANCHESTER RAILWAY.

OFFICES, 48, MOORGATE-STREET, LONDON.

Capital £3,000,000, in 100,000 shares, of £30 each.—Deposit £2 15s. per share.

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Richard Wormald, Esq. Macclesfield
John Boothroyd, Esq. Stockport
W. J. Little, Esq. Devonport
Messrs. Stanley and Washbrough, Bristol
Charles Naylor, Esq. Leeds
Secretary pro tem.—Edward L. Ogle, Esq.

Parliamentary Agents—Messrs. Parkes and Preston, 21, Gt. George-st., Westminster
The London promoters of this line, in their ordinary commercial operations, now pay for the carriage of goods, &c., a sum equal to four per cent. upon the whole capital—an amount of traffic which will pass upon the Direct Line when completed.

In its course the line will approach to and accommodate the following towns—viz., Barnet, St. Alban's, Dunstable, Luton, Ampthill, Bedford, Wellingborough, Kettering, Market Harborough, Leicester, Loughborough, Ashby-de-la-Zouch, Burton-on-Trent, Uxeter, Cheddle, Leek, Macclesfield, Stockport, and Manchester, terminating in the station of the Manchester and Birmingham Railway.

Applications for shares may be made, addressed to the provisional committee, or to the solicitors, at the company's offices, 48, Moorgate-street, London, of whom further particulars may be obtained.—July, 1845.

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Direct London and Manchester Railway, 48, Moorgate-street, London.
Gentlemen,—I request that you will allot me shares, of £30 each, in this company, and I undertake to accept the same, and to pay the deposit thereon, on the day when the shares shall be called for, and I undertake also to execute the Parliamentary contract and subscribers' agreement when required.

Name in full.....
Residence.....
Trade or profession.....
Reference.....
Address of referee.....

Date.....
This company is established pursuant to the following request and authority:—
"We, the undersigned, being interested in the trade of Manchester, and in the shortest and quickest intercourse between London and Manchester, hereby express our conviction that a direct line of railway between those places will give the public the greatest cheapness, convenience, and speed.

"That it is of paramount importance to the trade and to the public, that they should not continue dependent for communication with Lancashire upon one, and that a circuitous, line of railway.

"That the immediate formation of a direct line is essential, because, if delayed, it will become more and more difficult, in consequence of the branch railways which local necessity will originate.

"That an independent trunk line is necessary to guard the trade and commerce of the metropolis and Lancashire against excessive charges and the many evils of a rapidly extending monopoly.

"We, therefore, authorise and request Messrs. Ashurst and Son, solicitors, and Messrs. Sudlow, Sons, and Torr, solicitors, to take the necessary steps for the formation of a committee, with a view to the adoption of such a line.

Allen and Smith, London
William Allen and Brothers, Manchester
H. Bauman and Sons, Manchester
Robert Bentley and Co. London
John Burd and Sons, Manchester
Robert Barbour and Co. Manchester
George Brettell and Co. London
J. T. Bassett, London
Burlis and Gladstones, London
J. B. Banks, London
John Baris, London
James Bradbury, Manchester
Bradbury, Greston, and Co. London
Bowman and May, London
Blair and Burton, Manchester
S. A. Butterworth and Co. Manchester
John Biggs and Sons, Leicester
Caldecott, Powell, and Wilcox, London
Cook, Sons, and Co. London
J. and F. Cowper and Co. London
Courtauld, Taylor, and Co. London
Capper, Morley, and Co. London
Francis W. Coates, London
William Cash, London
Cheaper, Watson, and Jackson, London
James Carlton, Walker, and Lewis, Manchester
Richard Cobden and Co. Manchester
Thomas Crompton, Manchester
Darby and Garland, London

James Deacon and Sons, London and Manchester
W. and T. Devas, Manchester, and Routledge, London
Davies, Freeman, and Co. Manchester
John Dugdale and Brothers, Manchester
Ellis, Everington, and Co. London
David Evans and Co. London
Samuel Fletcher, Son, and Co. Manchester
George Fraser, Son, and Co. Manchester
George Faulkner and Co. Manchester
A. Grant and Brother, London
John and Edward Grandy, Manchester
Edward Granville and Co. London
Gillett, Porter, and Co. London
Gates, Coates, Bartlett, and Co. London
Lot Gardiner and Brothers, Manchester
Hood, Ward, and Hood, London
Henry Hilton, Manchester
Hobday and Cheetham, Manchester
Hoyle and Hanson, London
Richard Harris and Sons, Leicester
Johnson, Bulmer, and Co. London
Jameson and Banks
Kershaw, Leese, and Co. Manchester
Leaf, Coles, Smith, and Co. London
Luck, Castle, and Co. London
Lycett and Davies, London
Luck, Bouch, and Coath, London
John Lart and Son, London
Le Gros, Thompson, and Bird, London
Thomas Lomas and Co. Manchester
Liddard and Co. London
Lewellin, Truman, and Hitchcock, London
William Lawrence, London
Morrison, Dillon, and Co. London
J. and R. M. Riley, London
M'Clure and Haslam, Manchester
James Martin, London
Robert Mutrie, London
John Munn and Co. Manchester
James and William Morley, London
Nicholls, Lucas, and Co. Manchester
Ovington, Warwick, and Co. London
Oldroyd, Hodgson, and Co. London
J. F. Pawson and Co. London
Potter and Norris, Manchester
Peel, Holmes, and Co. Manchester
John and Nathaniel Phillips and Co. Manchester
Fussey and Pallet, London
Reddish and Bickham, Manchester
R. H. Robertson and Co. London
Rhoades and Williams, London
John Read, London
Samuel Ridley, Son, and Ellington, London
Rowlandson and Atkinson, London
Sadler, Foston, and Co. London
B. Salomons and Co. London
Sturt and Sharp, London
George and James Smith, Manchester
Thomas James Smith, London
W. B. and T. Storor and Co. London
Thomas Shepperson, London
Strachan and Roan, London
Sherwood, Gilbert, and Piper, London
Townend and Hickson, Manchester
Thomson, Brothers, and Sons, Manchester
Joseph Travers and Sons, London
Todd, Coston, and Co. Manchester
Tattersall and Mellor, Manchester
Tarsey and Millgate, London
George Virtue, London
White and Greenwell, London
Ward and Co. London
Winkworth and Proctors, Manchester
Thomas Worthington, Manchester
John Wreford and Co. London
Westram, Dignam, and Co. London
S. B. Watts and Co. Manchester
Wilson, Keith, and Co. London
Wreford and Pugh, London
Welch and Margatson, London."

SHEFFIELD AND SOUTH STAFFORDSHIRE.—The promoters of this line are negotiating with other companies for making a portion of it, and as to certain deviations required by the traffic of the country.—Further particulars will appear in a few days in a revised prospectus, with the names of the provisional committee.

JOHN OWENS,
WM. ARNOLD BAINBRIDGE, } Joint Solicitors.
Offices, 35, Moorgate-street, London, August 7, 1845.

ALTON, FARNHAM, AND SOUTH-WESTERN JUNCTION RAILWAY.—Provisionally Registered.—Capital £150,000, in 7500 shares of £20 each. Deposit £2 2s. per share, in accordance with the Standing Order of the House of Commons.

This railway will commence at or near the Farnborough station of the South-Western Railway, and proceed from thence by Farnham to, and terminate at, Alton, in the county of Hants. The line, which will not exceed sixteen miles in length, will traverse the rich agricultural district and hop grounds of Surrey, afford to a dense population the advantages of railway communication, develop the important traffic of this valuable portion of the counties of Surrey and Hants, and it is calculated will yield a highly remunerative return upon the comparatively small capital required to be embarked.

A detailed prospectus, with the names of the provisional committee of directors, will be issued in the ensuing week; in the interim, applications for further information and for shares, in the usual form, to be addressed to Richard Ford, Esq., solicitor, 28, Essex-street, Strand; and to Benjamin Nicholls, Esq., solicitor, Farnham.

ORLEANS, TOURS, AND BORDEAUX RAILWAY.—REPORT TO THE SHAREHOLDERS.

Your directors have the pleasure to report—

1. That the statutes of the company, by which it is constituted a Societe Anonyme, were approved by Royal Ordinance in the "Moniteur" of 16th May last. The company was then, for the first time, called into legal existence.

2. The delay of seven months between the adjudication on the 9th of October, and the homologation of the statutes on the 16th of May, proceeded from circumstances over which your directors had no control, and to which they will not further advert, than to say that the interval was not passed in inactivity.

A provisional contract was made with the eminent contractors, Messrs. Mackenzie and Brasse, for completing the upper works, and the efficient stocking of the railway through its entire length, ready to be opened to the public for a sum considerably less than the capital of the company.

Upon the faith of this provisional arrangement, the contractors zealously seconded the efforts of your directors, and gave immediate orders for the supply of rails, chains, engines, and the carrying stock generally, so that, in point of fact, not much time has been lost by the delay in the homologation of the statutes.

3. The first care of your directors was to obtain possession of the works from the Government, and to ratify the provisional contract with Messrs. Mackenzie and Brasse for the section of the line between Orleans and Tours (seventy-two English miles). The contract sum is 15,500,000 fr. (£220,000), and the period for the completion of the works and the opening of the line is the 1st Nov., in the present year.

Your directors would here beg to observe, that the company are allowed two years, from the period of the formal delivery of the works to them by the Government, for the completion and opening of the line to public circulation; if they can accomplish this in six months, they will have secured eighteen months' revenue, by anticipation, of the most productive section of the whole line.

4. The contractors are pushing the works with the spirit and energy for which these gentlemen are distinguished on both sides the channel; vast quantities of materials of every description have been in course of delivery on the line during the last four months.

Nearly one-third of the ballast was provided before possession of the line was obtained from the Government.

Two of the American excavating machines have been for some time past employed in getting the remainder of the requisite ballast, and there are now five locomotive engines and several hundred waggons engaged in the work of ballasting the line. The laying of the permanent way has proceeded at the rate of a mile per day for many weeks past, while the use of locomotive engines at once expedites the work of ballasting, and serves to test and consolidate the permanent way.

Fifteen of the thirty locomotive engines required have been ordered in England—two have already arrived out of the Stock Exchange in a great state of forwardness. The remainder of the carrying stock is building in France—all upon the most approved models, and of the very best materials and workmanship.

A great portion of the carriages and waggons are already finished, and the whole are in a very satisfactory state of forwardness.

5. These extraordinary exertions on the part of the contractors require corresponding efforts on the part of the shareholders in supplying the requisite funds.

Your directors, therefore, request that the shareholders prepare to pay another call of £2 per share, which will be required immediately.

August 11, 1845.

RICHARD PATERSON, Chairman.

ORLEANS, TOURS, AND BORDEAUX RAILWAY.—

THIRD CALL OF TWO POUNDS per share—making £6 per share paid up. In execution of Art. IX. of the Statutes of this company, the board of directors have made a CALL OF TWO POUNDS per share on the capital stock of the company, payable from the 30th to the 31st of August inst.—Notice is, therefore, hereby given, that the shareholders are required to pay the sum of £2 per share on the number of shares held by them respectively, and within the period above named, to any of the company's bankers.

Paris—Messrs. De Rothschild.
London—Messrs. Denison, Heywood, Kennards, and Co.
Liverpool—Messrs. J. Barred and Co.

Interest, after the rate of 5 per cent. per annum, will be charged for every day the call shall remain in arrear, after the 31st of August inst.

Certificates of shares, in the name of the proprietor, and under the seal of the company, will be delivered at the offices of the company in Paris and London, in exchange for the bankers' receipt for the payment of the present call.

The statutes of the company provide that shares upon which the calls shall not have been duly paid, may be summarily sold on the Stock Exchange in Paris or London, at the risk of the shareholder, after official publication of the numbers of the several shares so in arrear.

Chairman of the London Board of Directors.
Office, 2, Capel-court, August 14, 1845.

CHESTER AND MANCHESTER DIRECT RAILWAY,

WITH A BRANCH TO BIRKENHEAD.

Capital £1,000,000, in 20,000 shares of £50 each.—Deposit £3 2s. per share.

COMMITTEE OF MANAGEMENT.

Colonel the Honourable LEICESTER STANHOPE, Ashburnham House, London, Chairman
Major JOHN T. CROFT, Regent-street, London, Deputy-Chairman
David Ainsworth, Esq. Manchester
Samuel Barton, Esq. Disbury, Manchester
Hugh Beaver, Esq. Manchester, and Glyn Garth, Anglesey
John Burgess, Esq. Borough-bree of Manchester
James Farish, Esq. Lancaster place, London
Major Ford, of Bedouet, Carnarvonshire
Lieut.-Colonel Henry Hamner, Bear-place, Berks, and 7, Devonshire-place, London
Fraser B. Henshaw, Esq. Lower Seymour street, Portman square, London, a director of the Liverpool, Manchester, and Newcastle Junction Railway
Captain Sir John R. Hilton, R.N., Isle of Wight
J. Harney Higson, Esq. merchant, Manchester
Lieutenant-Colonel Hutchinson, B.E.F.R.S., Director of the College of Civil Engineers
D. T. Johnson, Esq. Alderman Churchyard, London
John Joseph Keene, Esq. St. John's Wood, London, Director of the National Provincial Bank of Ireland
W. King, Esq. Director of the Freemasons' Life Assurance Company
George Peter Livius, Esq. the Grove House, St. Luthbert's, and Ca. well Priory, Bedford
Horace W. Meteyard, Esq. B.C.L., Middle Temple, and Chatham-place
Benjamin Oliveira, Esq. F.R.S., Upper Hyde-park-street, London, a director of the Liverpool, Manchester, and Newcastle Junction Railway
James Orrall, Esq. Culcheth Hall, Kenyon
James Ogden, Esq. M.D., Manchester
David Price, Esq. Manchester
Major James Walker, K.H., St. James's-square
C. J. S. Walker, Esq. Longford, near Manchester
(With power to add to their number.)

ENGINEERS.
Sir John Rennie, F.R.S.; George Remington, Esq. C.E.

BANKERS.
Messrs. Rogers, Olding, and Co. London

National Provincial Bank of England, Manchester

SOLICITORS.
London—Messrs. Sir George Stephen and Hutchinson, 29, Moorgate-street.

Manchester—Messrs. Higson and Robinson, Cross-street; R. B. B. Cobbett, Esq., Marston-street.

Local Agent—Chester: John Walker, Esq.
The promoters of this railway, encouraged by the favourable support which has been given to the project, and in compliance with various recommendations they have received, have determined upon the addition of a Branch to Birkenhead, which, although it will manifestly tend to the advantage of the shareholders and the public, will be attended with comparatively little additional outlay. The project will retain its chief characteristic of a direct railway, and, by its connection, near Warrington, with the Grange Junction Company, is sufficiently comprehensive, without resorting to a complicated system of branch lines, or materially conflicting with the interests of existing companies.

The line will commence at the city of Chester, and proceed by way of Trafford, Frodsham, and Preston Brook, to Warrington, thence by Lymm and Salford, direct to Manchester. From a point on the main line, near Frodsham, a branch will be taken to join the Chester and Birkenhead Railway, so as to unite Manchester, in the most direct manner possible, with the docks now being formed at Birkenhead.

As Manchester, from its geographical position, is the centre of railway communication between Scotland and the most populous districts of England, so Chester, from a like cause, is the great centre of railway communication between the capitals of Ireland and of England. To connect these two points, by a direct and independent line of railway, must, therefore, be of the utmost importance, not only in a local point of view, but to the whole commercial intercourse of the country.

This line will be the most direct route, by Holyhead, to Ireland, and will be in all respects by far the preferable channel of intercourse and transit between Ireland and the great manufacturing districts of England. By the railways connecting Chester with Wrexham, Oswestry, Shrewsbury, Hereford, Gloucester, and South Wales, this will be the nearest route from Manchester to the south-western parts of England, and to the minerals of Monmouth and Glamorganshire. The communication with Bristol, Gloucester, and Exeter, will be speedy and direct.

On reference to the map it will be seen that a very considerable distance will be saved by this line, as compared with the present circuitous routes by Crewe and by Birkenhead—the former being fifty-two miles, and the latter forty-six miles, while the proposed line is only thirty-four miles—saving in the one case eighteen miles, and in the other twelve miles—besides the serious inconvenience, loss of time, and expense, of passing through Liverpool, and crossing the water at that place.

It is confidently expected that this line will be the precursor of another scheme, of no ordinary importance—namely, to render Chester an efficient port for large vessels. This subject was entertained by Sir John Rennie in 1833, and subsequently, in the same year, by the late Mr. Chapman, who wrote an able report upon the capabilities of the River Dee. It was again investigated in 1837 by Sir John Rennie and Mr. George Remington, and the practicability of forming a good navigable channel, for vessels of large burden, together with docks at Chester, was then fully and clearly established.

The entrance channel would commence at Dawpool, which is easy of access (and infinitely preferable, in point of access and safety, to the docks at Liverpool or Birkenhead) for vessels of large burden during eight hours every tide, both at springs and neaps, and the sill of the lock would be sufficiently low to admit vessels drawing twenty feet water to enter at all tides.

This railway, therefore, in connection with the proposed docks, will render to Chester and Manchester incalculable advantages. To the former it will restore the proper position natural to so important a city; to the latter it will give another outlet by sea to the manufacturing districts, free of the heavy port charges, dues, and risks, to which the produce is now subject. It has not been thought advisable to combine the two objects in one company at present, but, should it be found requisite, the two may hereafter be amalgamated.

Merits of no ordinary degree, therefore, may fairly be claimed for this railway, whether taken in connection with the proposed docks, or as standing alone, combining, as it does, all the advantages of any other lines, with this great addition, that it will be the high road to the most convenient outport of Manchester, and will be quite independent of any associations or influences which might tend to oppose the growing desire for a means of direct and independent communication between Manchester and the port of Chester.

The line has been carefully examined. There are no difficult earthworks to be encountered; on the contrary, it will be cheap, and of easy formation.

Power is reserved to the committee to deviate from the proposed line in the vicinity of Manchester, should ulterior arrangements render it expedient.

Applications for shares, in the usual form, and for maps and prospectuses, to be made to the solicitors, and to the following shareholders: Messrs. Shawell and Son, 25, Tokenhouse-yard; Messrs. Preece and Evans, 5, Cornhill; and Messrs. Taunton and Bush, 25, Austin-friars, London; Messrs. Houghland and Leese, Mr. Locke, Messrs. A. Birrell and Co., Thomas Leeds and Son, Henry Beston, J. B. Lock, and Samuel Slater, Manchester; Messrs. Neilsons, Messrs. Healey, Mr. Crisp, and Mr. Morris Reynolds, Liverpool; Messrs. T. N. Burdwell and Sons, Sheffield; Messrs. Wellbelove and Oastler, Leeds; Mr. E. A. Arncliffe, Wakefield; Messrs. Graydon and Earle, York; Mr. Thomas Boardman, Blackburn; Mr. W. H. Collis, Birmingham; Mr. Francis Stamp, Hull; Mr. L. Weatherburn, Huddersfield; Mr. William Cronheim, Halifax; Mr. Charles Spencer, Nottingham; Mr. Samuel Eyre, Derby; Mr. James Stokes, Cheltenham; Mr. Joseph Clark, Jun., Southampton; Mr. John Thomas Holland, Coventry; Mr. Wm. Mason, Bradford, Yorkshire; Messrs. Payne and Freer, Leicester; Mr. Wm. Tomkinson, Newcastle-upon-Tyne; Mr. Richard E. Hine, Macclesfield; Mr. Lea, Cheltenham; Messrs. Tate and Nash, Bristol; Mr. Wm. Miles, Worcester; Messrs. Reed and Nicholson, Edinburgh; Messrs. Ross, Perth, N.B.; and Messrs. H. and W. A. Tassie, Glasgow.

Applications for shares must be accompanied by a reference to the solicitors of the company, the shareholders, or some other responsible person.

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Chester and Manchester Direct Railway, Gentlemen—I request you to allot me shares of £50 each in the above railway, and I undertake to accept the same, or such less number as you may appropriate to me, subject to the regulations of the company, and to sign the necessary deeds, and to pay, when required, the deposit thereon of £3 2s. per share.

Dated this day of , 1845.

Name and residence in full

Profession and professional residence in full

Reference

CHESTER AND MANCHESTER DIRECT RAILWAY, WITH A BRANCH TO BIRKENHEAD.—At the Albion Hotel, Manchester, August 8, 1845, at a MEETING of the provisional committee of this company, GEORGE PETER LIVIUS, Esq., in the chair.

Resolved,—That, with a view to carry out the project of a direct railway from Chester to Manchester, with a branch line to Birkenhead, as announced in the prospectus already published, the following gentlemen be appointed the committee of management, with power to add to their number:—

Colonel Stanhope
David Ainsworth, Esq.
Samuel Barton, Esq.
Hugh Beaver, Esq.
John Burgess, Esq.
Major Croft
James Farish, Esq.
Major Ford
Fraser B. Henshaw, Esq.
Sir John Hilton
J. Harney Higson, Esq.

Resolved.—That no applications for shares be received after Monday, the 12th of August inst., except from parties locally interested in the line, and that the time for receiving applications from such parties be extended to Thursday, the 31st inst., after which day no applications for shares be received from any parties.

Resolved.—That these resolutions be advertised in the London and provincial newspapers.

GEORGE PETER LIVIUS, Chairman.

Colonel Hutchinson
D. T. Johnson, Esq.
John Joseph Keene, Esq.
William King, Esq.
George Peter Livius, Esq.
Horace William Meteyard, Esq.
Benjamin Oliveira, Esq.
James Ogden, Esq.
James Orrall, Esq.
Major Walker
C. J. S. Walker, Esq.

Resolved.—That no applications for shares be received after Monday, the 12th of August inst., except from parties locally interested in the line, and that the time for receiving applications from such parties be extended to Thursday, the 31st inst., after which day no applications for shares be received from any parties.

Resolved.—That these resolutions be advertised in the London and provincial newspapers.

By order, A. BARRETT, Secretary.

29, Moorgate-street, August 14, 1845.

CHESTER AND MANCHESTER DIRECT RAILWAY, WITH A BRANCH TO BIRKENHEAD.—At a MEETING of the committee of management of this undertaking, held this day, it was resolved, that, in order to comply with the Standing Orders of the House of Lords, as recently altered, it is expedient to reduce the amount of each share to £25, and to extend the number to 80,000, and that the deposit required be £2 2s. on each share; and that, in consequence of this alteration in the amount and number of shares, and the deposit required, the period within which shares must be applied for be extended to the 25th inst. for London applications, and to the 20th inst. for country applications.

Resolved.—That no applications for shares be received after Monday, the 12th of August inst., except from parties locally interested in the line, and that the time for receiving applications from such parties be extended to Thursday, the 31st inst., after which day no applications for shares be received from any parties.

Resolved.—That these resolutions be advertised in the London and provincial newspapers.

By order, A. BARRETT, Secretary.

29, Moorgate-street, August 14, 1845.

KOLLMAN'S RAILWAY LOCOMOTIVE & CARRIAGE

IMPROVEMENT COMPANY.

Increased capital £50,000, in shares of £10 each.—Deposit £2 10s. per share.

DIRECTOR.
The Very Rev. the Dean of Hereford, F.R.S., &c., Chairman.
WILLIAM KUPER, Esq., Deputy-Chairman.
JOHN BROWN, Esq., Captain M. H. Sweeney, R.N.
THOMAS DAVIDSON, Esq., Captain F. B. Wardroper, H.C.S.
SAMUEL H. POWELL, Esq., Walter White, Esq.
STANDING COUNSELLOR.—A. H. Merewether, Esq.
SOLICITOR.—George Smith, Esq., 24, Golden Square.
BANKERS.—Messrs. Cocks, Biddulph, and Co., Charing-cross.
SECRETARY.—A. W. Barnes, Esq., F.S.S.

OFFICES.—ALBION CHAMBERS, ADAM-STREET, ADELPHI.

The capability of Kollman's system of railway and its manifest superiority over those in present operation has been fully demonstrated by working models, which are exhibiting at the Adelaide Gallery, but the directors have now resolved, at the recommendation of several eminent engineers, to construct a full-sized locomotive engine and carriage, and lay down as near the metropolis as convenient a short but sufficiently extensive line of railway, with such curves and gradients as have hitherto been deemed insurmountable, that the practical superiority of the system might be fully developed. With this view the directors have obtained the consent of the shareholders to augment the capital of the company by £50,000, in 5000 shares, of £10 each, in order to enable them completely to carry out the objects for which the company was formed.

The superior advantages of the system may be thus briefly enumerated:—Complete security from overturning or running off the rails, facility of traversing curves at any practicable speed, power of ascending gradients hitherto deemed impracticable, diminution of dead weight and friction, and very considerable saving of expense in the construction, and in the wear and tear. In addition to these advantages, the directors have secured patents for a most important application of the system to canals, enabling them, under certain conditions, to compete with railways for the conveyance of passengers and goods, and promising most beneficial results. It will be at once perceived that while the capital required to carry out the company's plans is of small amount, the source of profit is almost unlimited.

Applications for shares, accompanied by a respectable reference, to be made at the company's office, Albion-chambers, Adam street, Adelphi, London, addressed to the secretary, where the terms for granting licenses and every other information can be obtained.

AGENTS.

Plymouth.—Messrs. Hopwood and Palmer.
Leeds.—Messrs. Hirst and Brooke, Albion street.
Manchester.—Messrs. Myers and Co., Police-street.
Edinburgh.—A. Moffat, Esq., George-street.

FORM OF APPLICATION FOR SHARES.

To the Directors of Kollman's Railway Locomotive and Carriage Improvement Company.

Gentlemen,—I request you to allot me shares in the above company, and I undertake to accept the same, or any smaller number that may be allotted to me, to pay the deposit thereon, and execute the Deed of Settlement, and all other necessary documents, when required. Dated this day of 1845.

Name in full
House of business (if any) and address
Profession or trade
Reference

CANAL OF THE ALPINES COMPANY.

Capital £100,000, in 5000 shares, of £20 (500 francs) each.

Proprietors not liable beyond the amount of their subscriptions.

DIRECTORS.

Theodore Woolman Rathbone, of Allerton Priory, near Liverpool, Esq. Chairman.
John Christopher Ewart, of New Brighton, near Liverpool, Esq. Dep.-Chairman.
Richard Hall, of London, Esq. Acting Secretary in England.
Edward Gould, of Paris, Esq. Acting Director in France.

BANKERS.

Messrs. Glyn, Hallifax, Mills, and Company, London.
Messrs. Charles Lafitte, Blount, and Company, Paris.

ENGINEERS.

Joseph Locke, Esq.

With a resident engineer, acting as agent, appointed by Mr. Locke, and approved by the Directors.

SOLICITORS.

Messrs. Rixon and Son, Jewry-street, London.

The Canal des Alpines is situated in the Département des Bouches du Rhône, in France, where the soil is barren and unproductive, unless irrigated with water, and its object is to supply water for irrigating the adjoining lands through which it passes. It is held in perpetuity by grant from the French Government, at about £40 per annum ground rent, and may be considered free from all chance of competition, or fluctuation of income.

It consists of the following divisions and lengths:—

1. From the Bridge Donneau, near the River Durance, through Orgon to St. Remy, twenty-one miles.
To be executed, under contract, at a cost of £16,000.
2. From St. Remy, through Eyragues, to the River Durance, near Chateau Renard, nine miles.
To be executed, under contract, at a cost of £38,000.
3. From St. Remy, through St. Gabriel to the River Rhône, twelve miles.
4. From the Durance at Rogonnois, to the Rhône at Tarascon, with two branches called the Barbanthanne and Boulbon Branches, about eighteen miles.

The revenue of the canal is derived from a water-tax, payable by the lands receiving irrigation from the canal. This tax is fixed by a grant from the French Government, at a certain rent of one litre forty-five centimes per French hectare of land; and, being commuted into money, upon the average price of corn for the preceding ten years, amounts to about thirty-six francs per annum per French hectare (nearly two and a half English acres).

The divisions Nos. 1 and 2 of the canal are expected to be completed and in operation by the summer of next year, and they will then be capable of irrigating upwards of 5000 hectares of land, and of producing an income, at 35 francs per hectare, of at least £12,000 per annum. The other divisions, Nos. 3 and 4, to be completed by the following year (1847), will be capable of producing from the water tax on the lands they irrigate a further income, considerably exceeding the above. The expenses of maintenance and administration, when the canal is finished, are estimated to be fully covered by a charge of not more than £5000 per annum; and there are other sources of income, in addition to the water-tax, arising from letting the water to drive mills, and from the produce of the mulberry trees on the banks, which are expected to yield the above amount annually, and leave the water-tax a clear net income. The contractor has supplied, and is bound under his contract to provide and plant along the banks, these mulberry trees; and he has also offered to enter into a contract to maintain the canal for a term of years at a lower rate than is assumed in the above estimate.

The canal is acquired by the company for a capital represented by 5000 first class shares of £20 each, on which 6 per cent. interest is payable as a first charge, and secured by the entire revenues of the canal, and also by other properties, so long as required to insure its uniform payment; and the company are to issue, when the income reaches £12,000 per annum, a first series of 500 second class bonus shares of £20 each, when £18,000, a second series of 500 second class bonus shares of £20 each; when £24,000, a third series of 500 second class bonus shares of £20 each; when £30,000, a fourth series of 500 second class bonus shares of £20 each. All these second class shares will carry 6 per cent. interest per annum, until the income exceeds £30,000 per annum, and then they will take amongst them rateably the whole remaining income, after paying 6 per cent. per annum on the first class shares. The first class shares are Capital Shares, for which the sum of £20 per share will have to be paid; but the second class shares are Bonus Shares, on which no payment has to be made.

The proceeds of 2000 of the first class shares (representing £40,000 of capital), and the under-mentioned prospective advantages are to be the property of the original proprietors and projectors; for which they make cession to the company of the grant in perpetuity from the French Government of the entire Canal des Alpines, twenty miles of which are finished, and commencing irrigating operations, and on which completed portion a sum exceeding £100,000 has been actually expended—this being by far the heaviest portion of the works. The proceeds of the remaining 3000 first class shares (£60,000) are to be applied to finish the canal. The contract to finish the whole of the remaining works for £54,000, has been entered into by a responsible contractor and landowner on the line of the canal; and the balance of £6000 of capital remaining beyond the £54,000 will, therefore, be applicable to the payment of preliminary and contingent expenses.

The original proprietors of the canal and the proprietors of first class shares will have the bonus shares divided amongst them, as set forth in the deed of settlement of the company, upon the following terms:—Of the first issue of 5000 second class shares, 2500 will be appropriated to the former, and 2500 to the latter (the proprietors and holders of the first class shares), in the proportion of one second class share to every holder of two first class shares. Of the second issue of 5000 second class shares, 2500 will be appropriated to the former party (the original proprietors of the canal), and 2500 to the holders of the first issue or series of second class shares, in the proportion of one second class share of such second series or issue, to each holder of two shares of such first issue. Of the third issue of 5000 second class shares, 2500 are to be appropriated to the original proprietors of the canal, and 2500 to all holders of second class shares, whether of the first, second, or third issue, in the proportion of one second class share of such fourth issue to every holder of six shares of such first, second, or third issue. As best explaining the nature of the investment in the stock of this company, and the benefits derivable from the bonus or second class shares, to a party who may have subscribed for, say twenty-five first class shares, and who will have to pay for the same £500, it may be stated that the revenues of the canal are charged in priority with £6 per cent. per annum on this sum in perpetuity, while his proportion of the four series of second class shares above-mentioned, when issued, will amount to a bonus exceeding £800, also carrying an interest of not less than 6 per cent. per annum. Thus the amount of a proprietor's investment would be more than doubled on the acquisition of all the bonuses, and the whole of this doubled investment would be carrying 6 per cent. interest at least. The surplus income, after paying 6 per cent. interest on the first class and bonus shares (viz. the amounts between £6000 and £12,000, and £12,000 and £18,000, and £18,000 and £24,000, and £24,000 and £30,000), is the fund appropriated by the deed of settlement to the Fondoteurs. When the income shall exceed £30,000 per annum, the Fondoteurs' fund will cease, and the whole revenue is divisible rateably amongst all the second class shares, after paying 6 per cent. interest on the first class shares.

There are £35,000 of debentures now chargeable on the canal, and payable at different periods up to 1853, which the original proprietors agree to discharge out of their proportion of second class shares. The discharge of these debentures is also to be secured by other property of adequate value.

The canal company will be formed by deed of settlement in the nature of a Société Commanditaire, whereby each shareholder has the same protection against liability as is given by an act of incorporation in England. The affairs of the company, until the canal has been completed and the second class shares issued, must, according to a law of France, be managed by a gerant in France, under the superintendence of a committee of directors, and when the whole of these shares have been issued,

the company can become a "Société Anonyme." Under the deed of settlement, £1000 per annum is appropriated to the committee of management, which is to consist, in the first instance, of the above-named directors, who go out of office in rotation, in the usual way, after the completion of the remainder of the works.

A deposit of £2 per share will be payable on allotment, and further calls will be made by the directors as they require the same; but no call will exceed £2 10s. per share, and there will be an interval of two months, at least, between each call. Applications for shares may be addressed to the solicitors of the company, or to the directors, at the company's office, No. 9, Throgmorton-street; but no application will be attended to, unless accompanied by a reference which may, on inquiry, prove completely satisfactory to the directors.

FORM OF APPLICATION FOR SHARES.

To the Directors of the Canal des Alpines Company.
Gentlemen,—I request you to allot me shares of £20 each in the above undertaking, and I agree to accept the same, or such less number as you may appropriate to me, subject to the regulations of the company, and to sign the necessary deeds, and to pay, when required, the deposit thereon of £2 per share.
Dated this day of 1845.

Name in full
Profession and professional residence in full
Residence in full
Reference

DERBYSHIRE, STAFFORDSHIRE, AND WORCESTER-SHIRE JUNCTION RAILWAY.—(Provisionally Registered.)

Capital £200,000, in 12,000 shares of £15 each.—Deposit £3 15s. per share.

The line of railway proposed between Uttoxeter and Dudley has been undertaken at the suggestion of several influential parties, as combining—without being a competing line with any railway at present made—all the advantages of several projected lines, with additions of no ordinary value. The town of Uttoxeter in the Dove Valley is itself the centre of a rich agricultural district, supplying already the markets of Dudley, Tipton, Walsall, Bilston, and Wednesbury, with cheese, cattle, and agricultural produce, but by a very expensive and dilatory mode of transit. All the proposed lines communicating with Manchester, London, and the Potteries, must necessarily pass to or near Uttoxeter. Already the Churnet Valley, Derby and Stafford, Derby and Crewe, Tean and Dove Valley, North Staffordshire, Manchester Direct Independent, Leicester and Ashby lines of railway, project a station at Uttoxeter. Assuming either of these former, or some equivalent, to pass, this will be the best route from Manchester, Macclesfield, the Potteries, Hull, Sheffield, and the north, to the mineral districts of South Staffordshire, and to Kidderminster, Worcester and South Wales. By the Leicester and Ashby line, which will communicate by its branch to Uttoxeter, traffic of great part of the east of England will be available for Staffordshire and the west.

Commencing at Uttoxeter, the line will be carried over favourable ground to Abbot's Bromley, thence down the Blythe Valley to Hamstead Ridge, where it will cross the proposed Leicester, Burton, and Ashby line, thence to Lichfield; crossing the Trent Valley Railway, it will pass close to Lichfield, through that portion of Cannock Chase, where the Eftington Canal passes the Brown Hills, thence by Walsall to Beccot-bridge on the Walsall station of the Grand Junction Railway. From this point the line will pass through Wednesbury, and the mineral districts of South Staffordshire to Dudley, where it will join all those railways that will connect the Staffordshire coal-field with Worcester, Ludlow, and Porthwyliaen on the south-west, Aberystwyth, Merthyr Tydfil, Swansea, Hereford, on the west and south. In fact, it will unite by the nearest route the east and west of England.

The population on the line exceeds 300,000, and the ordinary traffic arising from internal sources alone is sufficient to maintain the railway, and afford more than ample remuneration to the shareholders.

As a junction line—with the present immensely increasing public favour to railway travelling—it is scarcely possible to compute the amount of passenger traffic, but it must necessarily be very great.

Should it be deemed advisable to extend the line to Ashbourne, the lead, iron, stone, and coal of Derbyshire, the products of the paint manufactures and barytes works at Ashbourne, Cromford, &c., would find a ready transit to Walsall and Birmingham. The increase of passengers attracted by ready means of conveyance to the romantic country of Dove and the High Peak, would be, necessarily, very great. By the Uttoxeter Canal would be brought the copper ore, lime, and coal, abounding in the Caldon and Ribblesdale Mines, and be transmitted by this line to the manufacturing districts of Staffordshire, Warwickshire, and Wales, down to Swansea. A most influential provisional committee, connected with the line, will be published in a few days.

Applications for shares and every information to be made to William Arnold, Esq., Uttoxeter, and John Owens, Esq., 54, Moorgate-street, London.

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Derbyshire, Staffordshire, and Worcester-shire Junction Railway.
Gentlemen,—I request you to allot me shares of £15 each in the above railway, and I undertake to accept the same, or such less number as you may appropriate to me, subject to the regulations of the company; and to sign the necessary deeds, and to pay, when required, the deposit thereon of £3 15s. per share.
Dated this day of 1845.

Name in full
Profession and professional residence in full
Residence in full
Reference

DERBYSHIRE, STAFFORDSHIRE, AND WORCESTER-SHIRE JUNCTION RAILWAY.—NOTICE TO

STANDERS.—The supporters of this intended railway congratulate the very numerous supporters of the line upon the decision of the House of Lords in favour of the Broad Gauge being carried to Dudley, the terminus of this line; and to inform them that arrangements are nearly settled with other companies for completing the line of railway from South and Central Wales and the West of England to the clothing districts of Yorkshire, which will make this intended railway a section of one of the first trunk lines in the kingdom.

The publication of the names of the provisional committee has been necessarily delayed in consequence of these negotiations.

JOHN OWENS, } Joint Solicitors.
WM. ARNOLD, }

Committee Room, Moorgate-street, July 26, 1845.

DERBYSHIRE, STAFFORDSHIRE, AND WORCESTER-SHIRE JUNCTION RAILWAY.—IN CONSEQUENCE OF THE ALTERATION

OF THE DEPOSIT IN THIS RAILWAY TO 10 PER CENT.

JOHN OWENS, } Joint Solicitors.
WM. ARNOLD, }

Company's Offices, 55, Moorgate-street, London, August 14, 1845.

EREWASH VALLEY RAILWAY.—NOTICE TO

SCRIPTHOLDERS.—The Erewash Valley Railway Act having received the Royal Assent, all holders of the company's SCRIP are requested to transmit them to the secretary, Queen-street, Derby, on or before Saturday, the 23rd day of August inst., with their names, professions, and residences, written distinctly and at length, in order that they may be correctly REGISTERED. None but registered shareholders can vote at any meeting of the company. The secretary will give an acknowledgment for the scrip, and on the completion of the registry will exchange them for sealed certificates.

SAMUEL WHITAKER, Secy.

Queen street, Derby, August 6, 1845.

DIRECT WESTERN RAILWAY, FROM LONDON TO

FALMOUTH AND PENZANCE.

Capital £3,000,000, in 120,000 shares, of £25 each.—Deposit £1 7s. 6d. per share.

The line will commence at or near Newbury, in Berkshire, and proceed from there in a direct course to Taunton; thence by Tiverton to near Crediton, Okehampton, and Hatherleigh, Launceston, and Truro, to the port of Falmouth, with a continuation of the line from Truro, by Redruth, to Penzance. The towns of Devizes, Lavington, Ludgershall, Marlborough, Warminster, Westbury, Bradford, Trowbridge, Frome, Bruton, Wells, Glastonbury, Shepton Mallett, Castle Cary, Somerset, and Langport, and the populous villages in their vicinity, now destitute of the benefits of railway communication, will have these advantages conferred upon them, and be placed in immediate connection with the metropolis.

The rich agricultural and mineral districts of Devon and Cornwall will have similar advantages, and London will be connected with the city of Exeter, and the ports of Plymouth, Falmouth (the packet station of the empire), and Penzance, by the shortest and most direct course. The proposed line will also unite the western districts of the kingdom with Wales and the north and north-eastern counties, and be to the Great Western Railway that which the Trent Valley is to the London and Birmingham and Grand Junction Railways.

The wide gauge, the natural one of the western counties and of Wales, will be adopted, and such portions of the Great Western line as unite Newbury with the metropolis, and Taunton with Tiverton and Exeter, will be connected by junctions with the proposed line.

A distance exceeding thirty miles will be saved by the contemplated line between London and Exeter.

The prospectus, with the list of the provisional committee of directors, will be issued shortly; in the interim, communications are to be addressed to Messrs. Bell, Brodick, and Bell, solicitors, Bow Church-yard.

CHESTER AND MANCHESTER RAILWAY.—The object of the promoters of this

line is to form a direct route from Manchester, as the nucleus of the manufacturing districts, and, consequently, all the great towns of the north as well as Scotland, to Holyhead and Ireland; and in connection with railways now in existence, the nearest to the south-western parts of England and to South Wales. This line of railway will also serve, in comparison with the present Birkenhead route, eighteen miles, and with the Crewe route, twelve miles, and will avoid the loss of time and great inconvenience always attending going by Liverpool and crossing the water to Birkenhead. Commencing at the city of Chester, it will proceed by way of Trafford and Frodsham to Warrington, and from thence by Stretford direct to Manchester. Near Frodsham a branch will join the Chester and Birkenhead line, thus connecting Manchester and Birkenhead in the most complete manner. Another scheme connected with this proposed railway, and which it is confidently expected will be fully carried out and greatly benefit the line, is the rendering Chester a port for the admission of large vessels; this plan would restore to the large, populous, and ancient city of Chester those advantages and privileges which local circumstances have prevented her from retaining, and which have been transferred to other ports. This subject has for years formed matter of serious consideration to several of our first engineers; in 1835 Sir John Rennie entered upon it, Mr. Chapman wrote an able report on the situation and importance of the Dee, and in 1837 the former gentleman, in connection with Mr. George Remington, partially surveyed the spot, and clearly established the practicability of making a good navigable channel for vessels of large burden during eight hours of tide. These docks would thus bring a large access of business to the railway, and although at present it does not form a portion of the railway scheme, it is probable the two may be united. Taking the projected railway *per se*, it holds out every prospect of being a fair paying line, and should at a future time the formation of the docks be effected, it will add to the traffic at least two-fold.

RAILWAY GAZETTE.

IMPROVEMENTS IN THE ATMOSPHERIC RAILWAY SYSTEM.

SIR,—I have much pleasure in sending you a few remarks on the subject of your correspondent's (Mr. Craddock) letter, in your Journal of last week, on my system of procuring vacuum for the atmospheric railway, by the direct action of low-pressure steam. I thank your correspondent for the courteous and flattering style of his letter. It appears to me, that your correspondent has only had a partial or limited conception of my proposed system, which has probably prevented him from investigating its merits with sufficient clearness; if I am correct in this surmise, perhaps the following remarks may supply him, as well as your readers, with more complete information on the subject, by a detail of the more important principles, on which I found my system. With the endeavour to be clear in my own description of my principle of action in this invention, I shall beg to commence at the beginning.

In the first place, the object desired to be attained is, to remove the air entirely from the interior of certain large chambers, so that they may, as it were, become vast magazines of vacuum. The ordinary mode of doing this, is to pump out the air by air-pumps, which receive their power from a vacuum, created above or below the piston of a steam-engine. The principle I set out upon is simply this—why employ one vacuum to create another? when we could, by the primary process, attain the desired object, without the intervention of any secondary action, or machinery, whatsoever. Now let us examine how this is best to be done. One cubic foot of water, converted into low-pressure steam, will, in round numbers, yield 1700 cubic feet of steam, which will be capable (on being introduced at the upper end of an upright air-tight vessel) of displacing, or forcing out at an aperture below, 1700 cubic feet of air; if we now stop the further influx of steam, and close the aperture below, and either permit the steam to condense, *per se*, or perform that duty by a separate condenser, we shall have for our 1700 feet of steam, 1700 feet of very nearly perfect vacuum (supposing, of course, that our vessel was exactly 1700 cubic feet capacity). Now, if we suppose a communication opened between this magazine of 1700 cubic feet of vacuum, and an atmospheric railway pipe of similar capacity, we shall abstract one-half of its contents of air, and at once reduce it to the state of a vacuum of $7\frac{1}{2}$ lbs. to the square inch, or thereabouts. Here, then, we have done some work, so far, with our first 1700 cubic feet of steam. It will be evident that the remaining vacuum in the exhausting chamber, and that in the pipe it has partially exhausted, will be similar in extent—namely, each a half perfect vacuum. Now, let us suppose that we have, during the performance of this operation, discharged the air from a second chamber of like capacity to the first—viz., 1700 cubic feet, and that that vessel is just filled with steam on a balance with the atmosphere: if before opening the communication between our condenser and this steam-filled vessel, we first open a communication between it and our first vessel, which, as before described, is in the state of half vacuum, it is evident that this first vessel will abstract from the steam-filled vessel a very large portion of steam, until the two are then on a balance; on this simple system of mutual transfer we not only employ the first vessel to act on the second, as a preliminary condenser, but also, as it were, use the steam of the second vessel in great part twice over, inasmuch, as this transferred steam will so far act the same as fresh steam from the boiler, in satisfying the wants of the first, or "used up" chamber; this being the case, the second vessel has its vacuum rendered complete, by being brought into communication with the condenser, while the first vessel has its complement of steam made up direct from the boiler; which steam, flowing in at the upper end, performs the air discharging office to perfection. I fear, in my attempts to render my system easily understood, I have made what is in reality a most simple and rapid action, appear complex and tedious of performance; but, in point of fact, the whole process of displacing the air, condensing the steam which displaced that air, and the transfer of the steam from the one to the other, will be the work of some twenty or thirty seconds of time; and as the vessels which I propose to employ will be upwards of 150 feet in height, and ten feet in diameter, four in number, standing close together inside a tower, we shall have, by their combined action, a magazine of vacuum of remarkable perfection, of the vast capacity of 46,800 cubic feet, which would be capable of exhausting seven miles of fifteen inch atmospheric pipe at one masterly stroke, in a few seconds, producing, in that seven miles of pipe, a vacuum equal to seven lbs. to the inch, which is quite ample for all the purposes of atmospheric railway locomotion. These vacuum chambers, or vessels, will be formed of boiler plate, and lined inside and outside with wood, to prevent any loss of heat, it being important to maintain the chambers near the heat of boiling water, so as not to cause any undue loss of steam—this, however, is a very simple affair.

From actual experiments I have made, I find that when low pressure steam, say $\frac{1}{2}$ lb. to the square inch, is permitted to flow in at the upper end of a tall upright vessel, having an opening below, the included column of air is depressed and forced out with the utmost ease and rapidity, while, at the same time, there is no appreciable mixture between the steam and air, the two preserving the most remarkable distinctness of separation. This, in fact, forms the grand principle on which I act—namely, the vertical displacement of the column of air by low-pressure steam. At all times it will be most convenient to employ the time between the running of the trains, to prepare the magazine of vacuum all ready for instant action at any moment's notice; in this way a comparatively small boiler will answer. I may mention, that one grand advantage of having a ready-made store of vacuum at hand is, that the closing of the long valve is performed effectually the instant the communication is formed between the vacuum chambers and the atmospheric pipe, this will obviate much source of loss from leakage, which continues so long when the vacuum is produced by the comparatively gradual process of pumping out the air by the ordinary system. I trust the time is not now far distant, when a full-sized, and, therefore, true, experiment, will be made, to test, by actual practice, the comparative merits of my direct system, with that of the steam-engine and air-pump system, by erecting a set of my vacuum chambers alongside of one of the engines about to be employed on some of the atmospheric railways, obtaining the required steam for my system from the identical boiler, and working the two systems month about, and taking exact account of the coal consumed by each; I should stand or fall by such a true experiment as this, which is beyond all abstract investigations in getting at the real truth. The simplicity and common-sense principle, on which I found my system, will, I trust, some of these days, obtain for it such a fair trial; whichever company is first to do so, shall have the right to use it, free of all charge whatsoever, as regards patent right.

I fear my remarks have extended to a length far from convenient to your valuable columns, but, if you can give me space for their insertion, I shall feel much obliged. I am most anxious to give all the explanation I can of my invention, and although rather short of leisure at this time, I shall be glad to give any further explanation that may be required, but this is a subject which can only be brought to fair test by actual full-sized experiment.—Devonport, August 12.

JAMES NASMYTH.

CONTINENTAL RAILWAYS.

SIR,—I shall content myself at present with simply referring to the railway from Heidelberg to Mannheim, on the Rhine. On this railroad the ends of the timber sleepers are imbedded in broken stones, of a size similar to those usually employed for macadamized roads; on these timber, about four or five inches deep, rests, the surface of this receives a coat of tar, and on this last again reposes the iron rail. I confess I like all this very much, and admire the plan extremely, and from the equable steadiness and motion of the carriages, there seems nothing to be desired. The timber is derived from the Black Forest of Germany, or those of Württemberg; immense, indeed, are those floating rafts—I encountered one on the Neckar a quarter of a mile long; and I have seen one with 150 persons or more on board, and a dozen houses, including sheds. Some such rafts on their arrival at the *embouchure* of the Rhine, at Dort for instance, are valued at 20,000l. to 30,000l.—J. MURRAY: August 12.

DIRECT LONDON AND MANCHESTER RAILWAY.

TO THE EDITOR OF THE MANCHESTER TIMES.

SIR,—Although the gentlemen deputed to itinerate in support of "REMINGTON'S LINE" favoured me in their speeches with a large portion of their attention, I should not have asked leave to appear in your columns if you had not inserted from the *Railway Express* a long paragraph palpably written to influence the price of the shares, and wound up with the injurious imputation upon me which I shall presently quote. To the gentlemen who spoke, my thanks are due for the manner in which they were pleased to speak of my personal character, irrespective of my supposed dealing with what is called Remington's line. I am the more indebted to them, because nearly all who referred to me

were professionally interested in supporting the scheme they advocated. They doubtless spoke as to Mr. REMINGTON's line what they believed, but they were in error. The paragraph you have published from the *Railway Express*, and of which I complain, is as follows:—"Here we would gladly pause, after having thus glanced at what are the most striking features of this railway, but a sense of justice compels us to notice what cannot be considered other than 'sharp practice' on the part of Mr. ASHURST, the promoter of a competing line. In 1836 Mr. GEORGE REMINGTON planned the Direct London and Manchester Railway which bears his name. In 1840-1 he carefully surveyed the greater part of the country through which it will pass. Long after this Mr. ASHURST announced his competing scheme, the avowed intention of which was to connect existing and projected lines between London and Manchester. He found that REMINGTON's line was the favourite, as it deserves to be; and he does not hesitate to 'appropriate,' not the leading features of that line, but the actual line itself. This is stealing the bonum ready-made. It is pretty clear that this manner of doing business will not answer. We believe that public feeling is against the *rule*. But the very fact that the promoter of a competing line *throws his own plan overboard*, and coolly appropriates the rival one, is the very best, because the most unsuspicious and involuntary compliment which could possibly be paid to REMINGTON's London and Manchester Direct Railway."

The facts, as to me, are these:—In 1840, an advertisement appeared announcing a company for the formation of a railway from Manchester to London. After some time, the movers, who were unknown to the Manchester trade, found it necessary to apply to some of the gentlemen connected with that trade in London to support them. They were referred to me by some of the leading houses in the trade here, and I was requested to report my opinion, not of any line, but of the propriety of their uniting with the applicants. Before I was able to report upon the prudence of men with capital and influence, uniting with men not known to possess either, I was sent for to a meeting of "the board" in Cornhill, and was told that the landlord was urgent for his rent; and I was asked to pay that rent and take the solicitorship of the company. I declined the office, but made the advance, that I might have time to report. The result was, that a union was not thought desirable, and the matter died; Mr. REMINGTON's name was used on that occasion. About this time, in the last year, 1844, Mr. MULLOCK advertised that he had taken up Mr. REMINGTON, and intended to form a company. Mr. MULLOCK also found it necessary to obtain the support of the trade: he sought it, and was referred to me. He came to me, accompanied by Mr. WEDLAKE, of the firm of CLOWES, ORME, and WEDLAKE, the well-known and respectable solicitors, in London.

In consequence of this, I again had interviews with the principal houses in the trade in London; and they gave me introductions to many of the leading firms in Manchester, whom I saw on the subject. On my return, I made my report to those who deputed me; and they resolved that it was not desirable then to form a company. Mr. MULLOCK and Mr. REMINGTON thought differently, and they advertised a company, with the names of gentlemen as a provisional committee, who afterwards resolved that the company should not proceed. During all this time the only question was the propriety of forming a company, not the merits of Mr. REMINGTON's choice of a line. The gentlemen who instructed me knew, without the aid of either of us, that a straight line is the shortest, and that the straightest practicable, would be the best, and this of itself fixed the route. The document which was then prepared by me, and signed by many of the leading houses in the trade, and is in my possession, simply stated—"That a more rapid communication between London and Manchester by railway is of the highest necessity. That it is of paramount importance to the trade and manufactures of the kingdom that such communication between the metropolis and the northern parts of the country should not be dependent upon one line of railway only." These statements the subscribers understood and could make. It would have been absurd and bootless to have asked mercantile men to express an opinion upon the engineering merits of a line of railway not in being. Mr. REMINGTON informed me that he had not surveyed the line he suggested, but said that he had gone over the country so as to enable him to say with confidence, that his line was the only line that could be formed, and I believed it. He was naturally anxious to obtain the appointment of engineer; but he was unknown to the parties by whom I was requested to act, and they were desirous, if the matter proceeded, to have the line to be chosen approved by an engineer more generally known. He was unwilling to have this reference made except to one gentleman, and the matter ended. It is fortunate for me now that the absurd imputation is made against me of "filching" his line, that I have found the map of the line which he issued in 1840, and on comparing it with the map he now issues, I find that the two are essentially different.

In 1840, his line ran to Leicester, taking the Midland Counties Railway the whole distance from Leicester to Derby; resuming at Derby it proceeded to Leek and Macclesfield, neither touching Cheshire or Uttoxeter. His present line does not touch the midland counties, and does not go to Derby, and whoever knows anything of the country, or has Mr. REMINGTON's present map, can see the important and extensive change which this necessarily makes between the two. He has, then, so far as making red lines on a map gives title, entitled himself by a cheap and easy process to two lines, and his friends accuse me of filching one, but do not condescend to say which. They at the same time proceed to show a motiveless plunder for a valueless abstraction, by accusing me in a second count of not publishing any line. As to his first line, Mr. REMINGTON said it was impossible to make a better, and I have his printed plan before me, asking in 1840, 4,000,000L. to make it. To make his second line so essentially different, I have his plan and prospectus before me, asking for 3,000,000L. to make it. I have also before me another of his prospectuses, asking for a capital of 5,000,000L. to make it. If, as he says, he has carefully gone over these various and differing lines, his judgment must be sadly at fault. Had the trade determined to avail themselves of his services, it would have been necessary to have drawn his attention to these serious variances, but that necessity did not arise.

Mr. REMINGTON's friends have, in their speeches, confounded the formation of a company with the drawing of a line on a map, and have assumed the childish absurdity that to rule a line on a map, gives a title to the line of road and to the office of engineer. So far from taking either of Mr. REMINGTON's abstractions, I have not even been guilty of the sin of originating "the Direct London and Manchester Railway Company," which is really the offending point. In this year, Messrs. SUDLOW, SONS, and TORR, as they assure me, without knowing anything of Mr. REMINGTON, or ever having heard of his lines, registered and advertised, without my knowledge or privity, a direct line from London to Manchester. They also applied to some of the principal houses in the trade, and were referred to me; and then, and not till then, did I hear of it. I might, then, as Mr. REMINGTON did, have registered another company by adding another word to vary the title, but I was not guilty of the folly of endeavouring to establish two companies for one purpose, and of wasting the funds of both; but as the trade here was of opinion that a direct line must, and ought to be formed, with the consent of Messrs. SUDLOW and Co., my name was added to theirs, and I was requested to submit the views of the trade here to their friends in Manchester, which I did; received their authority in writing again, as the houses here thought that signatures given a year before ought not to be used when circumstances had altered, and opinions or interests might have changed. So far from adopting either of Mr. REMINGTON's lines, the managing committee of this company determined to have a line surveyed for themselves, and they gave authority to Mr. EASTRICK to personally survey the country, and give them his opinion of the best direct practicable route for a line. If ruling a line on a map between given termini constitutes ownership, I admit Mr. REMINGTON's title to as many lines as he rules, and I have not interfered with his efforts to realise them. His friends confound the formation of a company with the making, or rather the marking, of a line, and scold me because the trade have themselves formed a company.

That is the cause of a thing without which it would not be. If Mr. REMINGTON had been appointed engineer to the company they would not have heard of this preposterous claim to exclude the engineering world from an important tract of country. But, because a young man has published a map, with a line ruled upon it, and has asked the public to grant him, first 4,000,000L., then 3,000,000L., and afterwards 5,000,000L., to realise his crochets, he argues that the country for railway purposes is *tabooed* to all other engineers. Now, suppose that previously to the formation of our great railways some aspiring tyro had published a map with an impossible or a singularly difficult line, had then contended that the London and Birmingham, and Great Western Companies were bound to take him as engineer, and that the great minds of the engineering world ought to be shut out from the country he had marked upon his map, would the railway world have listened to such insane drivelling? And could those who contended for so wild a theory have hoped to sustain their characters for sanity whilst upholding it? Verily, those who advance such twaddle in the Town Hall of Manchester, sink in intellect below Johanna Southcott, for she addressed herself to the ignorant, but they go to the Athens and the areopagus of railway science to publish their fatuity.

Mr. REMINGTON cannot be ignorant that in 1840 many objections were mooted against his line, and that amongst other serious objections it was stated that it required at one place an embankment eighty-one feet high, and three miles long, and would have taken eighteen years to form it. Being accused of stealing his brains, I am bound to repel the accusation, but I confine myself to the widely different sums required upon the face of his own advertisements to show that their product was not worth stealing, and that those for whom I acted having capital and character to lose, it was my interest to avoid committing them to a gentleman whose reputation as an engineer has yet to be won, and to steer clear of a line presented by its parent in so unformed a state, that he did not know, when he offered it for 3,000,000L., that it would require 5,000,000L. to mature it. Mr. REMINGTON, or the friend who wrote the article in the *Railway Express*, says I stole the "bonum ready-made." I assure them I have not stolen the embankment spoken of. I do not affect engineering knowledge, but, irrespective of the embankment alluded to, a very moderate quantity of caution would induce any one to pause, ere he advised a company to adopt a plan for which sums so wide as those Mr. REMINGTON has named had been asked by its parent. I have not, until thus assailed, said a word of depreciatory of this gentleman's plans, for railroads are not made by verbal squabbles; but I am sure you will feel that, being accused of "sharp practice,"

"filching," and "stealing," if I had left the imputations unnoticed, I might, and should, probably, have been taken to have admitted, because I had not denied, charges made in language so gross and injurious. W. H. ASHURST.

P.S.—Since writing the above, I have had put into my hands the *Morning Herald* of the 23d of May last only, and I there find that Mr. REMINGTON advertised his line, and asks for 2,000,000L. only, in 40,000 shares of 50L. each; and I have also had brought to me a prospectus, issued by him in 1844, for a Direct London, Manchester, and York Railway; for this he asks 7,000,000L. Have the York Company stolen their line from him? By asking severally 2,000,000L., 3,000,000L., 4,000,000L., and 5,000,000L. for his proposed excursion to Manchester, he proves that, apart from the morality of the thing, it would be egregiously foolish to steal any line from so variable a genius.

PROGRESS OF RAILWAYS IN FRANCE.

[FROM OUR PARIS CORRESPONDENT.]

It appears that a fusion has been effected between three companies, heretofore considered the most important, that had formed themselves to bid for the concession of the Northern Railway—the company of Lafitte and Blount, the company of Rosamel, and the company of Pepin-Lehalleur; and the united company has placed itself under the wing of Rothschilds' and another great banking house. I do not know what the very numerous shareholders in England, of Lafitte's, and Rosamel's, and Pepin-Lehalleur's companies, may say to this union; but I happen to know, that the great body of shareholders in this country are bitterly exasperated at it. Of course, the first consequence of the union will be, that the persons who had subscribed for the greatest number of shares in one or other of these concerns, will have to content themselves with a much less number than they had previously calculated upon; and that other persons, perhaps the majority of the subscribers, will get no shares at all. This being interpreted into comprehensible English, means, that the whole body of shareholders will, some partially, some entirely, be tossed overboard, having to content themselves with the return of their respective deposits, minus the expenses that have been incurred—expenses that, for advertising alone, cannot but amount to a very considerable sum. It may be said, that the subscribers will lose nothing more than they would if their company had failed to obtain the adjudication. That is undoubtedly true; but still I fancy that if the great body of subscribers had been consulted, they would rather have run the risk of the adjudication, than consent to be sacrificed by a preliminary union between three companies they had hitherto looked upon as rivals. I do not say a word against the persons at the head of either of the three companies of Rosamel, Lafitte, and Pepin-Lehalleur—they are "all, all honourable men"; but certainly they ought, as a matter of delicacy, to have taken the trouble to consult the very numerous body of persons, English and French, who had shown their confidence in them, by subscribing for shares, before they had adopted the important step of forming themselves into one great company. As it is their precipitation lays them open to the charge of thinking only of themselves (for, of course, their interests are duly provided for, or, assuredly, the coalition would never have taken place), without caring one single straw about their supporters. *Le National*, the republican newspaper, denounces this union of the three companies in the most energetic terms, and even goes the length of declaring, that they have incurred the penalty of imprisonment from one month to a year, and of a fine from 20L. to 400L., declared in article 419 of the Penal Code, against all those persons who shall, by union or coalition, conspire not to sell, or prevent the sale of, at less than a certain price, of among other things, "*des papiers et effets publics*." You will perceive that the *National's* zeal somewhat outruns its discretion, for promises of shares in a railway company, if the company gets the railway, which is all at present that there is in the market, is a species of property which, by no ingenuity of legal argument, or perversion of legal judgment, can be brought within the designation of "*papiers et effets publics*." No, good *National*, Messrs. Rosamel, Pepin-Lehalleur, and Lafitte, have not been such asses as to run their heads against the Penal Code; they have done nothing but what, in a legal view, they are warranted in doing; but, as I have said before, they might and ought to have done it with a little more delicacy towards, and a little more regard for the interests of, the many hundred persons, who had done them the honour to place confidence in them, and even to deposit money in their hands.

What course will the Minister of Public Works pursue in face of this formidable coalition, or, if the word be preferred, union? Will he postpone the adjudication? Will he reduce the time for the concession of the railway law, as to render it impossible for the company to take it? Will he, in other words, take measures to have a real *bona fide* concurrence for the concession of the railway, such as the legislature intended; or, will he bow his head before the gigantic concern, in front of which marches his majesty Rothschild, king of finance? I am aware that there are other companies still in the field, which, if they pledged themselves to proceed to the adjudication, may still obtain such a large share of public support, as may enable them to present themselves boldly at the adjudication, on the anxious 9th of September. But, at this moment, the impression is, that Rothschild, and his three companies rolled into one, will carry all before him—it being believed that the Minister of Public Works, opposed as he is in principle to the adjudication system, and anxious, as he must needs be, to see the line in the hands of a responsible company, will not throw any obstacle in the way.

No doubt before this, the union of the three companies will have been announced, with great pomp, by your daily contemporaries. But your readers, with a moment's reflection, will perceive, that although, strictly speaking, there may have been a breach of faith with them, they really lose nothing at all, except the chance of a profitable investment of their money. That that is a loss serious enough to make them angry I admit, but, after all, with the great competition that would have existed, had this union not taken place, the chance was a very uncertain one; and even supposing that their particular company had been successful, it is by no means improbable, that the competition aforesaid would have so reduced the time of the concession, as to render the railway not one of the most brilliant investments in the world. The union will occasion loss to the holders of promises of shares; but those who subscribed for the sake of investment, and not for speculation, will get off, with the disappointment, and their share of the preliminary expenses, just as they would have done, if their company had actually failed at the adjudication.—The *Journal des Chemins de Fer*, in its last number, complains that the railway journal of Belgium had copied an article from its columns, without acknowledgment, which article had subsequently been translated in the *Mining Journal*, and quoted as from the Belgian paper. Your contemporary does not, of course, complain of the *Mining Journal*, but of the Belgian print.—Paris, Aug. 13.

NORTH WALES RAILWAY.—The first meeting of the shareholders in this company, since the passing of the Act of Incorporation, was held at the London Tavern, on Thursday last.—Sir W. WYNN was in the chair, who, in his opening remarks, dwelt much on the exceeding good prospects of the undertaking, not only as a source of profit to the proprietors, but as of great benefit to society at large, not only as between England and North Wales, but as forming a new and direct means of communication from Porthlynnell to Wicklow, and thence with the whole of Ireland.—The report stated that the Royal Assent to their Act had been obtained on the 21st of July last; the district through which the line would traverse was from Bangor to Porthlynnell, both in the county of Carnarvon, the latter port possessing great advantages, and being a safe and commodious harbour. It set forth that, although some opposition had been offered to them in Parliament, they had amalgamated with an opposition company, and made arrangements with a hostile landowner, which had been quite satisfactory on either side, and they had at last proved completely successful.—From the statement of accounts, it appeared that the total expenses up to the present time had been only 7500L.—The report was unanimously received and adopted.—On the proposal of Mr. CHAPMAN, that 1000L. per annum be placed at the disposal of the directors for their services, the CHAIRMAN stated that he had had a conference with his colleagues, and assured the meeting they should feel perfectly satisfied with 700L. It was, however, eventually carried, that 1000L. should be at their service, leaving to them, as circumstances might turn out, either to appropriate the whole or only the minimum sum.—Mr. J. MARRINER was then appointed secretary, at a salary of 300L. per annum.—Messrs. Brice and Edgington were chosen auditors, and thanks having been passed to the chairman and directors, the meeting separated.

HAYLE RAILWAY COMPANY.—A general meeting of the proprietors in this company was held at the offices, on Thursday last, the principal object being to empower the directors to treat with the West Cornwall Railway Company for the purchase by that body of the Hayle Railway.—A. L. GOWER, Esq., was in the chair, and, after reading a short report to the above effect, and a letter from the secretary of the West Cornwall Company to the secretary of the Hayle Company, stating their readiness to negotiate for the purchase of the line, contingent on the consent of Parliament, a resolution was passed, giving the directors the necessary powers, it being understood it was not to be disposed of for a less sum than what it had cost the proprietors.—James Alston, Esq., and L. J. ENTHOVEN, Esq., were re-elected directors; and Mr. Macdonnell, the late secretary, having resigned, he was elected a director in the room of Mr. Mowatt, and Mr. S. D. FLEMING was appointed secretary.—A sum of 10L. 10s. was then voted to the auditors, in consideration of three years' service, and thanks having been voted to the chairman, the meeting broke up.

DEVON ATMOSPHERIC RAILWAY.—Messrs. Harvey and Co. have nearly executed the order for six fly-wheels for this railway, measuring twenty feet in diameter, and each wheel weighing near fourteen tons. Two of them have been sent to their place of destination, and the other four are in a great state of forwardness.—Letters from Haarlem announce that the Mammoth engine has been put to work, to the satisfaction of the proprietors and engineers. An order is expected soon for two engines of the same size, and on a similar construction.—*Falmouth Packet*.

NEW RAILWAY VELOCIPÈDE.—Mr. R. JONES, of the Scotch Iron Foundry, Carnarvon, has recently constructed a new locomotive, combining the principle of the velocipède with that of a carriage, capable of carrying twelve persons. The machine is intended to propel a carriage along the Padarn Railway, but is also adapted for traversing the rails alone. The present is an improvement on the velocipedes previously constructed by Mr. JONES, for the quarries on the line—they being worked by the feet only, while the labour is now divided equally between the feet and hands—the motion being induced by handles and pedals, and is so facile in its movement, that a child can impel it rapidly to or fro at will. The machine is wholly composed of iron, and weighs about half a ton.

DIRECT LONDON AND EXETER RAILWAY.—In a former Number of the *Mining Journal* we adverted to this scheme; and, on perusal of the prospectus since published, we have no reason to withdraw the opinion then expressed in favour of the undertaking. The question is opened fairly and vigorously without fear or pretended concealment of its purpose, whether the existing establishments of the Great and South-Western Companies shall prevent a main trunk from the west of London to Exeter, and thence to the mining districts, and extreme part of England. Bearing in mind, that the extension of the Great Western from Bristol, its avowed object, to Exeter, was an enlargement little expected at the time by those most favourable to that company, and is so far inconsistent by reason of the sinuosity of its course from the metropolis, we cannot think the presumed opposition on its part can ultimately affect this project; though, doubtless, obstacles and difficulties will be suggested to it. It is not irrelevant to these observations to refer to a publication put forth at the time when the Great Western Company was at about the same period of existence as the present, emanating from one of its most able and zealous advocates, who, in a comprehensive manner, enters on the whole subject of railway communications. This little work was published in 1834, and is called "*Proceedings of the Great Railway Company and Communications*;" contains many truths and prognostics since singularly realised, and, among other things, states—"That railways will be constructed on all the main thoroughfares of the kingdom there can be little doubt." The course suggested by the Direct London and Exeter Railway, is certainly through a main thoroughfare of the kingdom, and is, moreover, the natural and long-used line of communication; extending, as it does, from its commencement, through the densely populated districts of Brompton, Hounslow, Brentford, and thence leaving gradually the Great Western as it proceeds, traverses a country where no railroad at present exists. The opposition from that company, therefore, offers no sound argument against the measure. There is, however, another opponent not far distant in the South-Western, which has been increased probably from the whispering abroad, as well as the notices from the company whose project we are reviewing, and is hereby engaged in co-operating with others to its attempted exclusion. Why should the project from London to Southampton, undertaken with a view to afford communication to the harbour, and thence facility of transport to other countries, throw out its branches to the west, because a main trunk line was suggested by others? We have abundant proof that public feeling is in favour of direct communications, and no doubt can exist as to their utility. The river intervening from the commencement, between the proposed line and the South-Western, shows that the latter is far from being able to afford accommodation to the inhabitants westward from the metropolis; a natural boundary is thus formed, and there appears to us no reason why the South-Western should successfully oppose any more than the Great Western the progress of this measure. The exigencies of the public require it, and that the course is open is evident by other companies being on foot to some of the places of resort near the metropolis—namely, Hounslow, Egham, Staines, and Windsor. It is quite idle to suppose these could be sanctioned while a trunk and independent line to Exeter is projected, giving the benefits of the shorter lines, as well as a communication to the extremity of the kingdom. Organic lines are those which, least of all, destroy the country, and with the taste which prevails ought, and will be, most popular and pursued by the Legislature. The delays which occur in proceeding through Bristol are subject of great complaint, several hours sometimes intervening during which the traveller is detained on his route. The necessity for another station is, therefore, evident, and it is not our intention to enter into the complaints sometimes made by those who are, or fancy themselves, aggrieved by the Great Western Company's neglect. Considering the extent of its duties, perhaps greater regularity could hardly be expected; but daily experience suggests, as increased communications are daily taking place, it is evident the transit effected by its aid cannot be usefully or safely increased. None is better calculated to stay undue monopoly, and yet not do permanent injury, so well as the Direct London and Exeter. In the spirit of showing the necessity for this, and not for the purpose of cavilling, it is observable that the writer of these observations, came from Southall, on a recent occasion (the 4th instant). The train was due at five minutes past nine; he waited till a quarter past ten at the station, but it had not arrived. At this time the long train from Bristol was due, and shortly afterwards arrived, having attached to it the train due at nine o'clock. *There* came together, laboured considerably throughout, and arrived, we believe, with great apparent difficulty. He examined the length of the entire train: the engine was at the most extreme part of the station, and the last carriage was at the other end of the platform, extending thus over the whole length of the covered building. If these things are allowed, is it not rather a matter of surprise that the trains arrived in safety at all, than that accidents occur? We think public feeling will go with us in these observations, and require that stations and companies be formed with arterial communications, so as to disperse the traffic from its tendency to increase to a dangerous extent from any one. For the reasons stated, we think the company will succeed in general estimation, and that its promoters are entitled to the thanks of the public for the bold and candid manner in which it is brought out, and that it is not too much to expect it will prosper, supported as it is by the respectable names attached to it.

ALPINE COMPANY'S CANAL.—At a time when railways alone in every part of Europe appear to form the only source for speculation or investment in new joint-stock companies—when mining, once such a chosen field, appears to be deserted by European capitalists—and even the shares of well-paying banks, insurance companies, &c., are almost a dead letter in the market, it is pleasing to have some new subject to which we can direct our thoughts and investigation; and it is with the more satisfaction that we are led to a review of the "Canal of the Alpes Company," inasmuch as it is not a canal for traffic, and one likely to attempt competition with railways, which would be sure to prove abortive, but purely for agricultural purposes. The canal is situated in the Department des Bouches du Rhone, France, a good soil, but where water is so scarce that, unless artificially irrigated, it becomes quite burnt up and unproductive. The object of this company is to irrigate in the most complete manner the lands through which it passes, and thus, under the same general climate as other lands more fortunately situated with regard to the liquid element by a judicious and well-regulated supply, render them equally or more productive. It is held by grant from the French Government at 40L. per annum ground rent, and we understand is free from the chance of competition or fluctuation of income. Twenty miles of this canal is already completed to St. Remy; nine miles is under contract for 16,000L. to the river Durance, near Chateau Benard; and two branches are also under contract jointly for 38,000L.—one from St. Remy to the Rhone, twelve miles; and the other from the Durance to the Rhone at Tarascon, eighteen miles. The tax to be taken for irrigation is fixed by the Government at 36 fr. per hectare, or 12s. per English acre per annum, and by the summer of 1846 the two first divisions of the canal will be complete, and capable of irrigating upwards of 8500 hectares of land, and thus realising an income of 12,200L. per annum; the remaining parts will be finished in the summer of 1847—in the meantime, all deposits will realise a dividend of 6 per cent. Other sources of income are also attached to this undertaking. The contractors have undertaken to plant mulberry trees all along the banks, which will yield a large income, and further profit will be made by letting water power for turning mills, &c. The capital required is 100,000L., and the scheme appears a fair and legitimate undertaking, and one, though novel, likely to prove highly remunerative.

LONDON, HOUNSLOW, AND WESTERN RAILWAY.—There is no district in the suburbs of the metropolis which offers such prospects for the well-doing of a railway as the western part of London to Brentford, Hounslow, &c., and it is only a wonder that, among the numerous projects which have within the past two years been brought forward, such a line had not been before suggested. The difficulty of a central terminus has probably retarded this useful project, and we are happy to see that a company is formed for constructing a line from Hungerford Market, to cross the railway bridge, which is to be applied for by the South-Western Company next session, on the east side of the suspension-bridge, thence run along the South-Western line to a point as far as Battersea, crossing the Thames to Fulham, thence to Hammersmith, Chiswick, Turnham Green, Brentford, Isleworth, and Hounslow, to Staines, with a branch from Hounslow to the Great Western line at West Drayton. Accommodating so numerous a population as is contained in the several villages and densely-inhabited spots in the immediate neighbourhood of the line not mentioned above, insuring a large portion of the goods' traffic now carried on the river at a slow rate and great expense, owing to shoals in summer, and stoppage by frost in winter, and taking into account a large portion of the steam-bus traffic now carried between London-bridge and Richmond, this line may be looked upon as certain to return a good per centage for the capital invested. Already have the South-Western line obtained the Act of Parliament for an extension to the south end of Hungerford-bridge, and it is expected the company applying for the railway bridge will obtain their Act in the ensuing session. The return of passenger traffic by omnibuses, cabriolets, and coaches, exclusive of private carriages, for the direct line to Hounslow alone is 80,768L. per annum, paid by 1,894,632 passengers, and reckoning double this return—and railways have ever been found to effect considerably more—we have an annual income of 161,536L. for a return on a capital of 700,000L., or, taking the traffic as it at present stands, produce 13 per cent. on the investment.